An exploration of the return to work experiences of individuals who are managing a traumatic hand injury and the development of a return to work intervention.

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Abstract

The effect of a traumatic hand injury on an individual can be wide ranging and include both physical and psychological dimensions. Getting back to work following such an injury is often challenging. This study aimed to explore individuals' experiences of returning to work following a traumatic hand injury and to use insights gained to develop and pilot a return to work intervention.

The study comprised two stages. A reflective lifeworld research methodology, with a longitudinal perspective, was used to underpin the first stage. Seven adults in full-time work were interviewed at three distinct time points following their traumatic hand injury. Many participants continued to engage in their usual daily activities, including being at work, and most of them initially expected to make a full and speedy recovery. It was with this view that participants made decisions concerning their return to work. Once back at work it became clear that the impact of the injury was wider ranging than they anticipated and difficulties arose with managers and colleagues regarding participants' ability to comply with their rehabilitation programme within the context of work.

The second stage used findings from stage one to extend the scope of the rehabilitation interventions, moving away from a hand therapy programme that focused solely on the healing structure to a rehabilitation programme that also included patient concerns in line with occupational therapy principles. A return to work intervention was developed which was integrated with the existing rehabilitation programme. This intervention was piloted with seven people in full-time employment. Reflective lifeworld research was used to analyse their experiences within the context of the phenomenon under investigation.

Results indicated that participants' return to work experience was more positive and controlled following the return to work intervention. Therapists' involvement in the development of the return to work plan provided an authoritative and independent way for managers and participants to implement the return to work intervention. An ability to manage their return to work and their exercise programme at the same time was reported by participants. This research has illuminated the complexity of the life and work journey of individuals with traumatic hand injury, the stages of the adaptation process and their rehabilitation needs. Inclusion of other stake holders

such as the manager and GP could be useful in developing the return to work intervention further through a randomised control trial.

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Chapter 1: Background

1.1 Introduction

Experiencing a traumatic hand injury can impact greatly on our ability to engage with the environment. Specialist surgical and hand therapy techniques aim to restore pre-morbid function. These medical interventions assume that usual function will resume once healing has occurred. Fitzpatrick and Presnell (2004) argued that such interventions are limited in their scope, as suffering a hand injury can have far reaching consequences not only on our ability to function but also on psychological health and with interpersonal relationships.

Return to work after a hand injury may be challenging both for the individual and their work colleagues. Insights into the multifaceted nature of the return to work process for individuals will be considered in the context of return to work systems in Australia, the USA where return to work programmes are widespread and in the United Kingdom given this is where this study is based. This establishes what is already known about return to work interventions and what could be applied to a hand-injured population in the United Kingdom. It will be argued that the value base of occupational therapy makes it well placed to provide return to work interventions in an acute care setting in the United Kingdom by maintaining a bio psychosocial focus. In its conclusion, the chapter explores the idea of a 'return to work' intervention, based on the evidence that patients returning to work following a hand injury may experience difficulties.

1.2 The hand and incidence of injury

Our hands are one of our main means of interacting with and manipulating our environment (Bowers and Tribuzi, 1992).They enable us to complete tasks from the finest to the most robust through the intricate interaction of tendons, muscles and ligaments. The nerves allow the hand to "see" through its ability to sense textures, temperature, pain and even pressure. Hands have cultural significance: they enhance or enable communication by adding emphasis through gestures. It has even been suggested that our brains and hands co-evolved and that our hands are an extension of our brain and vice versa, allowing us to put our stamp on the world

(Simpson, 2002). Tubiana *et al* (1998) describe the hand as "*being remarkably mobile and malleable and that it is capable of conforming to the shapes of objects to be grasped or studied and of emphasizing an idea being expressed*" (Tubiana *et al,* 1998, p.3). The ability of our hands to touch and feel is vital for our wellbeing. Children depend on touch to help them learn about the world around them, including the ability to learn about the qualities of temperature, texture, shape, elasticity and resilience.

As our hands allow an important means of interacting with the world it is perhaps not surprising that hand injuries are one of the more common skeletal injuries, and they account for 10-20% of attendances at accident and emergency departments in the United Kingdom (Chan and Hughes, 2005; British Society for Surgery of the Hand, 2007; de Putter *et al,* 2012). This equates to over 1.36 million attendances related to hand injuries in the United Kingdom every year (British Society for Surgery of the Hand, 2007). The most recently published incidence of hand injuries that required specialist surgical care in the United Kingdom published by the British Society for Surgery of the Hand (1992) cited that twenty-five per cent of these injuries required specialist care and surgical intervention. The complexity and intricacy of the management of traumatic hand injuries has led to the development of specialised hand surgery and hand therapy services in the United Kingdom (Barton, 1998).

In the United Kingdom, the emergence of the speciality of both hand surgery and hand therapy informally developed during the Second World War as the challenge of offering methods of treating servicemen and women with damaged hands became needed on a large scale. Surgeons from both the established Orthopaedic field and the newer specialism of plastic surgery felt that by working jointly, they had a great deal to offer this patient group. They formed the "Hand Club" in 1952 which evolved over time into the British Society for Surgery of the Hand, established in 1968 (Barton, 1998) which has developed into a sub-speciality that continues to thrive. Early on, allied health professionals, usually occupational and physiotherapists came to be viewed as integral members of the hand rehabilitation team. During the 1970's and 80's team work between occupational therapists and physiotherapists who shared an interest in hand rehabilitation began to evolve. This resulted in the formation of the British Association of Hand Therapists at the Royal London Hospital in 1984.

Currently, the British Association of Hand Therapy view hand therapists as being a registered occupational therapist or physiotherapist who specialises in the rehabilitation of patients with conditions affecting the hands or arms (British Association of Hand Therapists, 2014). Hand therapists usually work alongside surgeons with the aim to manage patients' recovery following surgery. Since that time the surgical and rehabilitative management of traumatic hand injuries has developed further and both are now regarded as specialisms in their own right. Interventions provided by hand surgeons and therapists have greatly improved the managed healings of such injuries and specific and detailed protocols of care have been developed and continue to be developed, which have the aim of regaining as closely as possible pre-morbid function of the damaged structure(s) (Evans, 2012). Hand surgeons view hand therapists "*as playing a crucial role in the recovery from injury of the hand or wrist, and in the recovery from hand surgical operations. Hand therapy is integrated into the hand surgery team*" (British Society for Surgery of the Hand, 2014). Historically hand therapists have been integral to the medical management of hand conditions and the structure of hand therapy services in the National Health Service have been developed to reflect this.

Hill *et al* (1998) is the most recent study that described the incidence and severity of hand injuries in the United Kingdom. The authors surveyed the incidence of hand injuries in four Accident and Emergency departments in the United Kingdom and results demonstrated that the incidence of hand injuries occurred in men more than women (male: female ratio was 2.2:1). The mean age of hand-injured men was 26.4 years and in women 29.2 years. Of the patients surveyed 16.3% of injuries sustained were caused by a fall; 15% by sport; and 7% were work/machinery related. The findings described in this study were similar to those described by Rosberg and Dahlin (2004) in their Swedish study.

An audit of patients being reviewed in the hand trauma unit where this study was based was conducted in 2007 by the researcher. Findings from the audit provided similar results to those described by Hill *et al* (1998) and Rosberg and Dahlin (2004). The patient group was made up of two thirds men who had mainly sustained traumatic injuries at work, participating in sports or accidents at home (see Appendix 1).

1.3 Current post-operative treatment for hand injured patients

The following section outlines the context in which current rehabilitative treatment is carried out. If an individual sustains a traumatic hand injury they may undergo surgical exploration and repair. Within the first few days following surgery individuals need to begin a post-operative rehabilitation programme in order to maximise the healing potential of structures in the hand (Barabas, 2013). Specific and detailed treatment protocols of care have been developed and continue to be developed to manage whatever structure in the hand has been injured and repaired. The repair of these tendons, particularly if damaged at the level of the fingers is considered challenging to restore its pre-morbid level of function (Peck *et al*, 2014). There is a risk in the first two to three months following surgery, that the tendon may rupture or the joints of the fingers may become stiff and lose their ability to bend and straighten fully (Peck *et al*, 2014).

Post-operative protocols of care have been devised for all the tendons, bones and nerves (or a combination of all three) of the hand and are used to ensure a good surgical repair that enables the tendons or damaged structure(s) to fully bend and straighten once completely healed. The post-operative rehabilitation interventions are developed with the understanding that usually the repaired structure will not initially be strong enough to allow normal function for between eight to twelve weeks (Lalonde, 2011). During this rehabilitation phase of up to twelve weeks, the repair often needs to be protected with a cast or splint that needs to be worn full time for the first four to six weeks and, following this initial period, patients may need to continue to wear their splint for protection and at night for a further four to six weeks (Evans, 2012).

Additionally, it is usual that the patient will need to participate in an hourly exercise programme that will also last eight to twelve weeks after surgery and sometimes longer, depending on the severity of the injury. This exercise programme is initiated by the hand therapist, with the patient in the first few days after the surgical repair when the wound is not yet healed. The patient has to learn, engage in and persevere with this exercise programme from the first few days following their surgery or there is a risk that the repairing structures will stiffen and lose their ability to move. The exercise process has its challenges because, if the patient over exercises, the surgical repair may rupture; however, if they do not exercise enough,

the surgical repair may adhere, become stiff and fail to regain any mobility (Evans, 2012).

The implementation of these treatment protocols has the aim of regaining as closely as possible pre-morbid function of the damaged structure(s). Literature continues to be published that describes the surgical and rehabilitative management of all structures that power, move and control the hand (Kaskutas and Powell, 2013; Peck *et al*, 2014). The aim of such surgical and rehabilitative literature is to continually try and develop interventions that improve the surgical and rehabilitation outcomes by shortening the rehabilitation time, minimising splint wearing regimes while ensuring a good surgical repair.

There is a need to focus on ensuring a good surgical repair through the development of good surgical techniques and good rehabilitation programmes for this patient group, but how an individual may be able to engage with such a detailed and intrusive rehabilitation programme is often not discussed in more detailed terms than the fact there is a need to participate in such a programme (Kaskutas and Powell, 2013). Such a focus on medical concerns is needed to maximise the likelihood of regaining as close to the pre-morbid level of function as is possible and the role of the hand therapist has been developed for this purpose.

1.4 Impact of having a traumatic hand injury on the individual

This section will examine literature that considers the impact a hand injury may have on an individual. Both psychological and physical impacts will be discussed.

One of the first studies that explored the psychological impact of traumatic hand injury was undertaken by Grunert *et al* (1988). The authors investigated the incidence and nature of psychological symptoms occurring during the first two months following severe hand injuries. In their USA based study, patients who had sustained severe hand injuries at work were psychologically screened by a clinical psychologist within the first five days of their injury. These injuries included amputations, significant functional loss and cosmetic scarring, or both. The screening took the form of a structured interview that focused on the following areas: perceived cause of the accident, psychological symptoms related to the trauma, family's reaction to the injury and knowledge of any future surgical intervention that

had been recommended. They were re-interviewed at one and two months after the injury. Sixty seven patients participated in the study, 49 received weekly psychological treatment. The remaining 18 received treatment on two occasions. Terms used are consistent with a diagnosis of acute post-traumatic stress disorder (PTSD) and in their study 94% displayed one or more of these symptoms that directly resulted from the injury. The Royal College of Psychiatrists (2013) describe PTSD as a condition which develops after an individual has been involved in, or has witnessed, a traumatic event. The results of the study by Grunert *et al* (1988) show that the most prevalent symptoms reported were flashbacks and nightmares. The authors reported that by the second month following surgery, although patients still experienced flashbacks they reported that they had greater control over them.

A second trend concerned the cosmetic appearance of the hand. Initially, post injury, people were just happy that they had not lost their limb but as time passed they became more aware of how the injury looked and how possible negative reactions from the general public may affect them (Grunert *et al*, 1988). Lastly, emotional lability, or uncontrolled crying was still pronounced at the second month and the study concluded that this was in keeping with the grieving process that they might be going through. Grunert *et al* (1988) demonstrated that hand trauma can cause significant psychological distress. In addition the authors found that the number of psychological symptoms progressively reduced over the first two months but the authors did not report on symptoms after this time. Again this emphasised the need to look in more broad terms at how an individual was able to manage following a traumatic injury and although the study did not specifically examine return to work issues it started to look beyond the physical aspects of such an injury. There was no consideration of how these insights might be incorporated into a treatment programme for hand injured patients but it led a shift in the research towards considering psychological concerns rather than solely focusing upon medical concerns.

Johnstone (1993) completed a literature review that examined the psychological impact following a traumatic hand injury. It was noted that "*the physical hand injury does not occur in a psychological vacuum*" (Johnstone, 1993, p.221). This literature review argued that rehabilitation interventions should not only focus upon the healing of the damaged structure but should widen the focus to acknowledge other concerns. Johnstone added that "*although difficulties can occur following mutilating*

hand injuries, one cannot make the assumption that all individuals who have undergone such an injury will experience an episode of adjustment-related difficulties" (Johnson, 1993, p.43). The course of adjustment will vary greatly from individual to individual. The author went on to describe intervention techniques that may prove useful for health-care workers when setting treatment goals. These included the need to create a realistic picture of acute and long term goals for the patient and family; that immediate and long term physical and psychological adjustment is influenced by the surgeon's interactions with the patient before and after surgery and concluded that the adoption of a bio-psychosocial perspective towards rehabilitation interventions for patients with hand trauma would be useful.

Support for the idea that the first two to three months following a traumatic hand injury is the time when most change occurs, came from Gustafasson and Ahlstrom (2004). This Swedish study aimed to explore any consequences of an acute traumatic hand injury by following up people for a period of one year after their trauma. This prospective study assessed 91 patients three times over the course of a year following their injury. The authors used psychometric assessments that indicated that there was an impact on mood and that this was greater in the first three months following injury. Additionally, functional limitations were reported as having an impact on daily activities and ability to work. Notably, the functional limitations described bore no relationship to the type of injury, location of the injury or whether the dominant hand was injured. They identified that medical, functional and psychological changes were greatest in the first three months; however, patients were still reporting difficulties one year after their injury. The authors concluded that there is a need to widen the type of rehabilitation interventions offered to this patient group as, by focusing exclusively on medical interventions, psychological and functional impacts may not be taken sufficiently into account.

As the time of greatest change both functionally, medically and psychologically has been noted to be in the first three months of injury, it would follow that this is the time to focus on interventions that may take such issues into account. The longitudinal nature of Gustafasson and Ahlstrom's study (2004) revealed that patients' abilities to manage their injury may change over time. The initial twelve weeks following injury is the time of greatest change for patients; this time coincides with when they are attending hand therapy outpatient appointments thus providing a

window of opportunity to take into consideration broader interventions for this patient group.

Gustafsson *et al*, (2012) carried out a prospective study that described psychological distress in eighty three hand-injured patients over ten years. Questionnaires were posted one week, three months, one year and 10 years after the hand trauma. The questionnaire used was the Impact of Events Scale (IES) (Horowitz *et al*, 1979), a self-report scale in which the participants are asked to report how often they have experienced intrusive and avoidance symptoms in the previous week. Results demonstrated that patients with intrusive and avoidance symptoms in the first few weeks after their injury may recover naturally so it was concluded that if patients were experiencing symptoms of psychological distress at three months it may be worthwhile referring them for a psychological review. Regardless of any mental health repercussions the time of which individuals are making decisions and plans concerning their ability to engage in the day-to-day lives, such as returning to work, is the time when many patients may be experiencing psychological distress. Gustaffson *et al* (2012) described that some participants did not initially report psychological distress but developed symptoms three months after their injury. It was these same participants that reported a high level of distress ten years after the accident. The authors suggested that this may be due to an initial focus on physical concerns which may have overshadowed any potential psychological symptoms. It was not made clear if this focus was made by the hand therapists or the participants.

Fitzpatrick (2007), in a phenomenological study exploring five individuals' perspectives of their twelve-week rehabilitation programme following a tendon injury, found that the impact was far more wide-ranging than just the inconvenience of having to participate in an hourly exercise programme. Themes that emerged included feelings of isolation. Participants described withdrawing from their usual activities and spending most of their time at home. They reported having fears that ranged from being afraid of risking the surgical repair to being afraid of being viewed in a negative light by the people who lived in their locality. All initially felt that their hand would never work again and this impacted greatly on their mood. All experienced a loss of role (including ability to work), and many felt that other people did not understand the full meaning of the impact of the injury. All participants reported feelings of dependency on others, which emphasised that the injury also

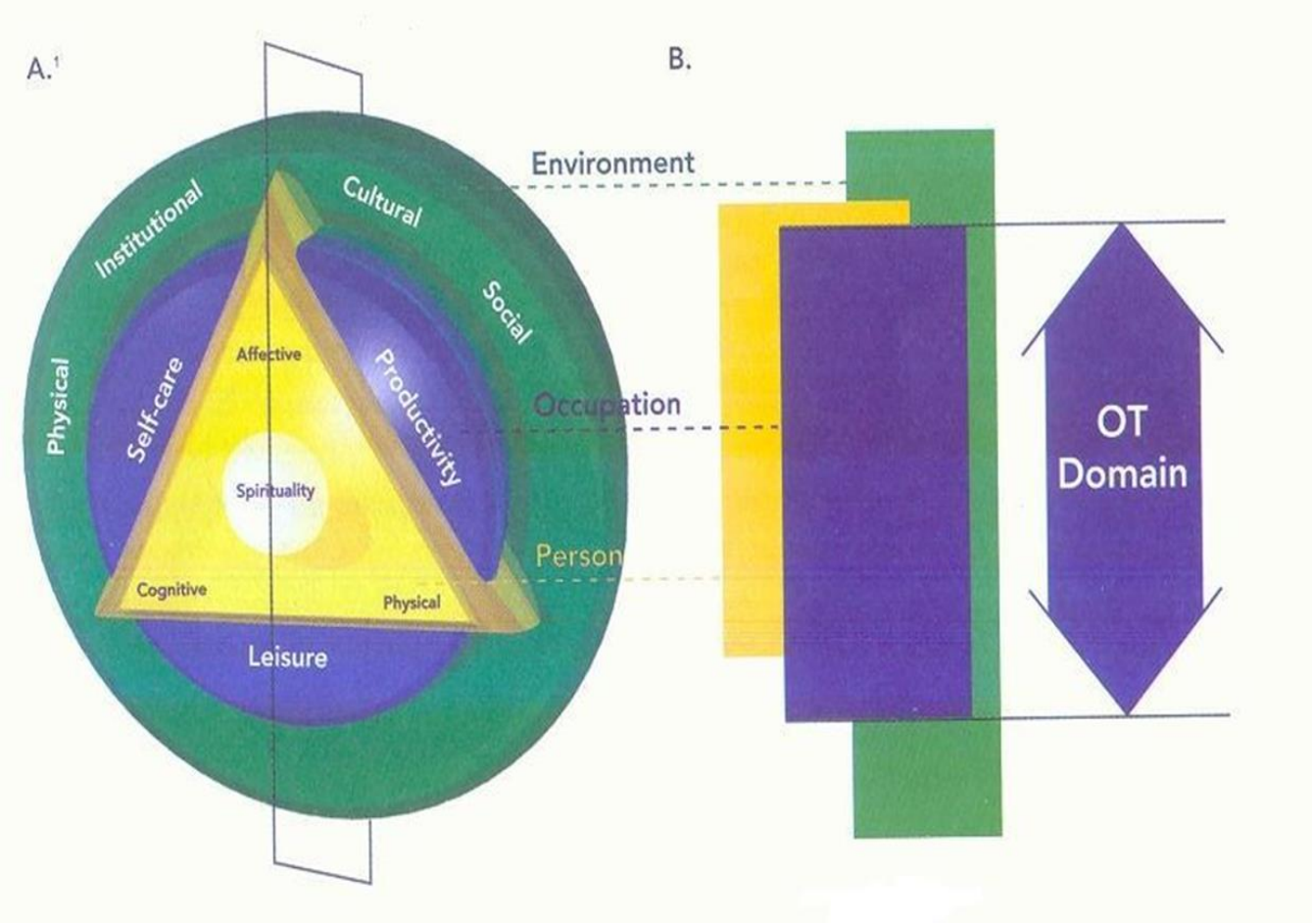
had an impact on other people's lives. The impact on an individual is more complex than just having to engage with their exercise programme, suggesting the need to widen the treatment base to include the specific needs of individuals.

The above studies have outlined that there is a range of challenges that an individual has to contend with in the first twelve weeks following hand injury and that the impact of the injury can be felt well beyond this initial period of intervention. This twelve week period is also the time in which patients will have most active contact with surgical and hand therapy teams. It raises the question as to how an individual is able to integrate their treatment programme into their daily life whilst experiencing wide ranging impacts of physical, social and emotional effects from the injury. The literature highlighted the fact that there can be considerable difficulty experienced but indicates it is little understood about how such difficulties can impact upon the choices and decisions that individuals make when living with a traumatic hand injury.

As has been described occupational therapists often work as hand therapists and using the principles of occupational therapy could provide an opportunity to examine the broader context of such injuries. The College of Occupational Therapists define occupational therapy as providing "*practical support to enable people to facilitate recovery and overcome any barriers that prevent them from doing the activities (occupations) that matter to them. This helps to increase people's independence and satisfaction in all aspects of life*" (http://www.cot.co.uk/ot-helps-you/what-occupational-therapy, 2014).

The ability to engage successfully in these meaningful activities is dependent upon an interaction between the individual, the things they do (occupations) and their environment (Duncan, 2011). Polatajko *et al* (2007b) focussed on these interactions to develop the latest version of the Canadian Occupational Performance and Engagement (CMOP-E) Model (Figure 1.1). This conceptual model provides a framework to examine the interplay between these three components and how this interaction can impact on an individual's occupational performance. Polatajko *et al* argue that occupation is "*the bridge that connects the person and the environment*" (Polatajko *et al*, 2007a, p. 23). Occupation is viewed as the core domain in occupational therapy (Law and Laver-Fawcett, 2014).

Figure 1.1 The Canadian Model of Occupational Performance and Engagement (Polatajko, et al, 2007b, p.23)



Theoretical underpinnings of this model focus on client centredness. Development and learning theories are represented in the belief that the individual has the ability to adapt and acquire skills once injured or disabled. The CMOP-E is made up of three components, the person, the environment and the occupation.

The 'person' in the model is represented by a yellow triangle in the middle of the model. Performance components that make up the person are located (cognitive, affective and physical) at the corners of the triangle. The environment is represented by the green outer circle and the person is located within the environment as it is within the environment that the individual exists and where occupations occur. The environment can affect the person and the occupation in different ways and these are classified into four components; physical, cultural, institutional and social. It is within this part of the model that the person is presented with occupational opportunities. The occupation aspect of the model is represented by the blue circle and is divided into three parts; self-care, productivity and leisure. In the transverse sectional view, occupation is at the forefront, as occupation is the core domain of concern to occupational therapists because it is by engaging in various occupations that the person interacts with the environment. Occupation can therefore be viewed as the link between the person and the context, as well as a means through which the person engages with their environment.

The model is informed by the principles of client centredness. The need to follow an approach that includes patients' concerns and needs was advocated by Law et al (1995), who argued that occupational therapy interventions should be client-centred, "*an approach to service provision which embraces a philosophy of respect for, and partnership with, people receiving services*" (Law *et al*, 1995, p.253). This approach that used client-centred practice principles was initially developed for occupational therapy in Canada in the 1980s. In the United Kingdom, Sumsion (2000) furthered the development of this approach and argued that client-centred practice provides a framework that enables occupational therapists to be holistic in their treatment practices. The definition of client-centred practice has evolved and in 2000 Sumsion revised the definition of this approach for occupational therapy in the United Kingdom. This was achieved by running focus groups with 67 occupational therapists who worked in a wide variety of treatment settings. One hundred and sixty five components of client-centred practice were generated and seven themes were formed. The definition that was developed was as follows:

"Client centred occupational therapy is a partnership between the client and the therapist that empowers the client to engage in functional performance and fulfil his or her occupational therapy roles in a variety of environments. The client participates actively in negotiating goals which are given priority and are at the centre of assessment, intervention and evaluation. Throughout the process the therapist listens to and respects the client's values, adapts the interventions to meet the client's needs and enables the client to make informed decisions" (Sumsion, 2000, p. 308).

The idea that client-centred practice underpins occupational therapy practice is challenged by Maitra and Erway (2006). Their US study aimed to comparatively analyse the perceptions of clients and occupational therapists regarding their involvement in the process of client-centred practice. Eleven occupational therapists and thirty patients from a care of the elderly unit took part in semi-structured interviews to gain insights into how treatment goals were devised. The occupational therapists all reported that they were client-centred in their approach and delivery of occupational therapy services but the patients reported that they were unaware that a client-centred approach had been used as they were not included in the development of their treatment programme. The authors concluded that there was a difference of perception between both groups concerning the use of, and participation in a client-centred approach to treatment planning. The authors highlighted the need for occupational therapists to develop a strategy that focuses on their patients' day-to-day roles and to ensure that rehabilitation interventions are more effective by including patient goals.

Hammell (2013) put forward the suggestion that the client-centred practice framework had evolved into a way of working that focused upon occupation enabling skills rather than on a philosophy of respect for their patients. Too few studies have examined clients' perspectives of the client-centred approach which Hammell (2013) felt was problematic as an imbalance in power between occupational therapists and their clients "*may both shape and limit the degree to which clients feel able to participate in a collaborative partnership with therapists*" (Hammell, 2013, p. 145). Hammell (2013) argued that to regain a position of respect, the patient should play a central role when developing rehabilitation interventions. Such a focus on respect may provide an opportunity to enable occupational therapists to work in a more collaborative way with hand injured patients. The need to focus upon how an

individual is able to participate in their daily occupations within the context of their lives, adapt to new situations when confronted with an injury is viewed as a primary concern by occupational therapists.

1.5 Personal rationale for investigating traumatic hand injury

Having worked as an occupational therapist in the field of hand therapy for many years, it quickly became apparent that interventions provided for this client group were very focused upon the medical management of the injured hand. This is important as ensuring a good surgical repair and a high standard of post-operative management ensures good healing of the damaged structure(s) to as close to pre morbid levels as possible (Evans, 2012). Average post-operative treatment times following a traumatic hand injury average about eight to twelve weeks. During the treatment time the patient attends regular outpatient hand therapy appointments to guide the healing process. During these outpatient appointments patients would discuss how they were attempting to come to terms with their injury and would regularly comment upon the impact the injury was having on their lives and often on the lives of those around them. It appeared that such an impact was considerable and my background as an occupational therapist made me want to explore in more detail their experiences and the impact that such an injury may have on an individual's ability to manage their usual daily activities.

I previously suggested (Fitzpatrick and Presnell, 2004) the need for an occupational therapy perspective to the field of hand therapy and concluded that to do this hand therapists should apply occupational therapy principles in their interventions and not solely concentrate upon medically driven interventions. The need to include patients' perspectives in the development of rehabilitation interventions is well established in the philosophical base of occupational therapy, one that is based on the belief that the health of each person is the product of more than their physical state. Their emotional and intellectual status, social life, spiritual wellbeing, lifestyle and the environment in which they live all make important contributions to their physical and emotional health (Reed and Sanderson, 1999; Kielhofner, 2008; Townsend and Polatkjo, 2013).

Fitzpatrick (2007) examined people's experiences of coping with a traumatic hand injury and the impact such an injury had on their lives away from the confines of the

hand therapy department. The results were more wide ranging than I expected and the amount of assistance that was needed was far greater than I imagined. All experienced a reduction in their daily roles and their ability to participate in day-to-day activities was greatly curtailed. Levels of frustration among participants were high as a result. My findings are supported by Case-Smith (2003) who also proposed that following hand surgery, rehabilitation interventions following a traumatic hand injury should include both medical considerations and the individual's functional performance. Such potential goals are made up of the need to include an individual's ability to complete daily activities of daily living, and return to work.

1.6 Overview of UK policy related to returning to work after ill health

An individual's ability to engage in their usual activities of daily living can be seriously compromised following a hand injury. One of the areas of daily life that is significantly affected is the ability to return to work following the injury (Gustafasson and Ahlstrom, 2004). Given the importance of working life and financial security for individuals, the literature that considers return to work will be considered in more detail.

Being out of work can negatively impact an individual's health. Getting people back to or keeping them in work has been the focus of Government policy in recent years (e.g. DWP, 2004; DWP, 2006; DWP, 2008b and DWP, 2012). The benefits of an individual being in work are multiple, these can impact in terms of self-esteem, mental health and financial stability (Waddell, 2008, Black, 2008, DWP, 2008a). Assisting individuals to remain in work can also be of benefit to society as a whole and in recent years government policy has put a strong emphasis on getting people back into work rather than claiming state benefits (DWP 2012). Access to benefits is now determined by a medical assessment (DWP, 2008b) to evaluate if an individual is fit for work and therefore not entitled to claim benefit. An individual will not be permitted to remain on benefits indefinitely but will need to be engaged in a return to work programme or training. The minimum legal entitlement for an individual if they are off work due to sickness for more than four days is Statutory Sick Pay (SSP) for up to twenty eight weeks (DWP, 2013). This is either paid by the company to the employee or by the Department of Work and Pension to the employee. Depending

on the company's policy it may be possible that it has a company sick pay scheme that is over the statutory minimum.

The responsibility has been placed on employers to provide 'reasonable adjustments' to an employee's working conditions (such as working shorter hours or adapting work equipment) if they become disabled because of their sickness or injury (Equality Act, 2010). The Equality Act states that the employer needs to be involved in any return to work programme. Return to work programmes are becoming established in the United Kingdom but the process of returning people to work is fragmented as there is no coordinated system or organisation that manages this process (Joss, 2011, Bisiker and Millinchip, 2007). The lack of communication between the various groups involved, such as GPs, employers, family members, colleagues and rehabilitation workers, for example, can hinder the return to work process by complicating it and allowing the injured person to "fall through the cracks of a system that was not set up to be sensitive to their particular situation" (MacEachen *et al*, 2007, p.158). Curtis (2003) for example stated that it is not until an individual becomes sick or injured and needs to take time off work that they need to become aware of their company's sick-leave policy and how it may apply to them.

The Government has recognised the need to manage return to work and introduced the Statement of Fitness to Work or 'fit' note which replaced the old 'sick' note in April 2010. The new form affords an opportunity for a GP to indicate that an individual may not be able to carry out their normal work duties due to illness but that they may be able to participate in a modified form of work (Coggon and Palmer, 2010). The 'fit' note introduces the idea that many jobs can be done by individuals with temporary or permanent health conditions. Factors that can be considered when determining if an individual could return to work relates to both the individual and the nature of the job and may include:

- nature and severity of health problem(s),
- individual's attitudes and expectations,
- physical and mental demands of job,
- potential for work to exacerbate illness, and
- safety considerations.

The potential for modification to the job can be considered as well. Options available to GPs include:

- a phased return to work - a gradual increase in work duties or hours,
- altered hours - changing work times or total hours,
- amended duties – changing work duties, and
- work place adaptations - changing aspects of the workplace.

Coggon and Palmer (2010) added that it is important that doctors "*should be careful to remain within the limits of their knowledge and competence and to recognise the uncertainties that accompany incomplete information and the handling of complex clinical cases*" (Coggon and Palmer, 2010, p.341). This statement was expanded upon by Suff (2011) whose survey with 224 managers found that 85% believed that GPs were not good at communicating what employers need to do in order to help workers back into work and that four out of ten struggled to correctly interpret what was being asked of them, while a third found it difficult to know how to implement what was being suggested by the GP. Buchanen (2009) found that GPs can become frustrated as they often do not know enough about a patient's work content or environment to make an informed decision when completing the 'fit' note. Welsh *et al* (2012) added that the 'fit' note has been well received by GPs. They carried out qualitative interviews with 15 GPs located across the United Kingdom and found that use of the 'fit' note has been used as an opportunity for GPs to negotiate with patients the possibility of devising a modified return to work plan as opposed to making the decision to the sign the person off work or not. GPs felt that employers were the main obstacle when arranging an early return to work as it was understood that the employer made the final decision about whether to implement suggestions made by the GPs. In addition, it was felt that there was not an opportunity to write in-depth return to work plans and as a consequence the ability to request an independent return to work assessment would be welcomed.

The introduction of the 'fit' note appears to have been welcomed by both GPs and managers as a positive step but work needs to be done to further improve communication between both parties. McCarthy (2011) argued in her opinion piece that, "*ultimately, a person's ability to work is based upon that individual's personal perception of their own fitness or otherwise to work, and not upon measurable parameters*" (McCarthy, 2011, p.342). This highlights the need to include patient perspectives when devising return to work interventions.

Allied health professionals, including physiotherapists, occupational therapists and podiatrists, have developed a tool that provides an opportunity for these professional groups to be considered as potential alternative signatories of the 'fit' note. The Allied Health Professionals' Assessment of Fitness for Work form (AHP- AFWR) was developed by the Chartered Society of Physiotherapists, the Society of Chiropodists and Podiatrists and the College of Occupational Therapists in 2011 (Chartered Society of Physiotherapists, Society of Chiropodists and Podiatrists, College of Occupational Therapists Ltd, 2011) to assist their members to provide return to work advice for their patients. The Department of Work and Pensions and the Royal College of General Practitioners were consulted when this tool was being developed. The AHP – Assessment of Fitness to Work cannot be used as a method of claiming ill-health benefits; to do this the General Practitioner will still need to issue a Statement of Fitness to Work certificate.

Coole *et al* (2013) found in their survey of occupational therapists working with individuals with musculoskeletal conditions that only a third of respondents had heard of the AHP-AFWR. Many respondents felt that they lacked confidence, knowledge or skills when filling in the document. There were also concerns raised that, as there was no payment structure put in place by the NHS or Social Services, AHP's may not use it. The AHP-AFWR was deemed potentially useful by respondents but it was not clear how it could be best used but it may be a means of providing more detailed information than a 'fit note'.

Alsop (2004) in her opinion piece describes the socio-political context in which vocational rehabilitation currently takes place in the UK:

"It sits largely within the realm of the Department of Work and Pensions, which is concerned with the national economy, whereas the individual's rehabilitation sits with the Department of Health and is concerned with individual function and personal well-being but only until the individual no longer requires medical care"(Alsop, 2004, p.252).

The individual can therefore become lost in the system as ultimate responsibility is not taken by either Department. She suggested that occupational therapists are well

placed to bridge the differing political agendas and help the relationships between health and work to become more overt in nature. For occupational therapists to do this, Alsop felt that there was a need for the profession to rediscover core occupational therapy skills that concentrated on developing graded activities in workshops for individuals to (re)gain the skills needed to successfully return to work.

1.7 Considering the role of occupational therapy in return to work

Occupational therapy aims to enable individuals to engage in activities or occupations, during their daily lives. Townsend and Polatajko, (2013) posit that the ability to engage in daily occupations is essential to our health and well-being and define occupation as something that "*refers to everything that people do during the course of everyday life"* (Townsend and Polatajko, p.380, 2013). The authors go on to describe that occupational therapists aim to enable individuals to participate in their daily activities through a process of collaboration between the occupational therapist and the individual. In order for an individual to engage in their daily occupations following a traumatic hand injury there would be a need for rehabilitation interventions that took into account medical concerns as well as the day-to-day concerns of the individual (Fitzpatrick and Presnell, 2004). The role of the hand therapist is to manage the post-operative medical concerns for the individual.

Currently in the United Kingdom, return to work or vocational rehabilitation programmes that have been developed by occupational therapists are localised in nature and have been set up to tackle a locally defined need (Brewin and Hazell, 2004; Bisiker and Millinchip, 2007; Inman *et al*, 2007 and Reagon, 2011). These studies indicated that occupational therapists were indeed able to link the employee's medical condition, functional abilities, psychosocial status and work demands. Coole *et al* (2013) carried out a survey that aimed to gain insights into the vocational rehabilitation interventions provided by occupational therapists working with patients with musculoskeletal injuries in the United Kingdom. Two hundred and fifty seven occupational therapists responded from an initial sample of nine hundred and sixty hospitals or rehabilitation units. Key findings highlighted that occupational therapists provided informal advice concerning getting back to work. Contact was not often made with their patients' employers as a large proportion of occupational

therapists were uncertain about their roles and responsibilities with this patient group and that there might be legal implications if they liaised with their patients' employers. Occupational therapists did not feel supported to provide vocational rehabilitation support beyond giving their patients advice. Therapists cited that they felt unclear if they were legally able to provide return to work advice and often simply focused upon the healing of the musculoskeletal condition. The occupational therapists were not taking into account the context of their patients in relation to their ability to work and they were not taking a role in providing such a service. A lack of time and resources was often cited as a difficulty and restriction in providing more thorough vocational rehabilitation interventions. The lack of resources may be because the focus upon rehabilitation needs in the National Health Service has reduced and that occupational therapists are not using an holistic approach that considers their patients' needs.

Joss (2002) felt that these core occupational therapy skills had receded due to the fact that: "*efforts to contain costs within the National Health Service has led to a rationing of services. The last twenty years have seen services diverted to acute care, with rehabilitation services predominantly focused on promoting independence in activities of daily living and preparing the patient for discharge from hospital*" (Joss, 2002, p.142).

The necessary outpatient resources that would allow therapists to prepare a patient for return to work have become scarce (British Society of Rehabilitation Medicine, 2000). Stuckey (1997) argued that "*occupational therapy is one of the few disciplines that understand the relationship between the employee's medical condition, functional abilities, psychosocial status and work demands*" (Stuckey, 1997, p.277). This idea is rooted in the philosophical base of occupational therapy. The health of each person is the product of more than their physical status; their social life, spiritual well-being, lifestyle and the environment in which they live all make important contributions to their physical and emotional health (Reed and Sanderson, 1999). These components are regarded as being integrated and interdependent on each other, so they cannot be meaningfully analysed separately (Townsend and Polatkjo, 2013). With this in mind, Frank and Thurgood (2006) suggested that opportunities for occupational therapists in the United Kingdom in the field of vocational rehabilitation are emerging and that: "*vocational rehabilitation is now seen as a marriage between health interventions, which aim to improve*

functional status, and the demands of the workplace" (Frank and Thurgood, 2006, p.126).

Thurgood and Frank (2006) argue that the perceived shift in government policy provides an opportunity for occupational therapists. They challenge the profession to expand their role into vocational rehabilitation by applying for positions that utilise occupational therapy core skills of assessment, programme planning, patient empowerment and liaison with relevant others.

As the majority of hand injured patients treated in the United Kingdom are of working age (Rosberg and Dahlin, 2004) it may be necessary to consider potential difficulties in getting back to work for this patient group. The research studies considered in this section, although small in scale, highlight in detail the need to include various agencies to assist with the return to work process. These insights may provide a means of enabling occupational therapists to provide return to work programmes in other areas of practice. Currently no return to work programmes for individuals who have sustained a traumatic hand injury have been developed and run on a national basis in the United Kingdom.

Occupational therapy-led return to work programmes in the United Kingdom are still at a developmental stage (Frank and Thurgood, 2007; Joss, 2002). Current occupational therapy literature in the United Kingdom is encouraging occupational therapists to refocus and to begin to incorporate individuals' return to work needs into rehabilitation programmes as a matter of routine (College of Occupational Therapists/National Social Inclusion Programme, 2007) . Such interventions need to be developed to illustrate how the bridge between medical and social care can be made and, if successful, to enable such interventions to become an option for occupational therapists to use in the future. The College of Occupational Therapists and the National Social Inclusion Programme (2007) add that it should become a norm that occupational therapists should include work needs in rehabilitation programmes for patients. The use of the AHP Assessment of Fitness to Work form can be used as a means to highlight the need for occupational therapists and other allied health professionals to include return to work planning when developing rehabilitation interventions, although Coole *et al* (2013) described that such interventions are poorly understood and are not yet widely used by occupational therapists.

Occupational therapists working in hand therapy in the United Kingdom are usually employed in an outpatient setting where patients come to the hospital or health unit where the therapist is based to receive treatment over the course of their rehabilitation programme. The main focus of the treating occupational therapist is to maintain the integrity of the repairing structure rather than examining how the individual may integrate their exercise programme into their daily activities. Curtis (2003) highlighted the fact that it is usual that individuals had limited knowledge about their employers' sick leave policies when first sick or injured: entitlement to sick pay, access to a Human Resources Department if applicable, impact on their family and need for support. In addition, issues concerning the workplace and how they would be able to do their usual daily working activities were not fully understood.

Joss (2011) examined the optimum way to provide a return to work intervention that is easy to administer, cost effective and is able to assist individuals to get back to work and focused upon the use of Functional Capacity Evaluations. Functional Capacity Evaluations, initially developed in the USA in the 1970s, are typically made up of a series of work related assessments. These assessments tend to only evaluate an ill or injured worker's ability to perform the physical demands of the job. Joss (2011) argues that there is limited evidence that such evaluations can predict work outcomes reliably as wide disparities exist in the ways that results from Functional Capacity Evaluations are interpreted. For example, a clinic based Functional Capacity Evaluation bears little resemblance to an individual's work environment. It is a simple assessment that does not take into account psychosocial influences such as motivation, mood, confidence and symptom management. Joss (2011) concluded that Functional Capacity Evaluations can be a useful component of the vocational evaluation process. This type of vocational rehabilitation intervention has been developed and used in the USA and it may be of interest to examine how it has been utilised.

The role of hand therapy has been described and the main focus is to ensure that the repairing structure is able to regain as close a level to pre-injury function as possible (section 1.2). The role has been developed to reflect this and although hand therapy literature describes the need to include patient concerns in treatment

programmes (Gustafsson *et al*, 2012) how this could be achieved has not been described.

1.8 Return to work programmes in the USA and Australia

A review of occupational therapy-led return to work programmes that are running in other countries may prove useful to explore what form they take and how they initially became established. Return to work and vocational rehabilitation programmes are well established in Australia, Canada and the USA (Innes and Straker, 2002; Lysaght, 2004, Holmes, 2007 and MacEachen *et al* 2007) but in the United Kingdom they are still emerging and can be localised in nature (Coole *et al*, 2013). Return to work programmes in Australia and the USA have been developed and are carried out through insurance based schemes. In Australia, in response to mounting costs following individuals' injuries at work, the Federal Government made changes to workers' compensation legislation in the mid to late 1980's (Innes, 1997). The changes in Australian law have resulted in universal insurance coverage for employees in the country and the onus is now on the employer, in conjunction with their insurance provider, to provide rehabilitation services to ensure as speedy a return to work as possible.

Innes and Straker (2002) described how such rehabilitation interventions have evolved and how the focus is upon individualised return to work plans. In the USA, Shaw and Polatajko (2002) concurred with the need to provide individualised return to work interventions as they argued that each individual will have unique return to work requirements. Lysaght (2004) undertook an audit revealing that occupational therapists are heavily involved in return to work programmes in the USA but these programmes vary hugely in their accessibility for individuals, often depending upon insurance coverage of the individual or the employer. These countries have used insurance based systems to bridge the gap between medical and social services; however in the UK these insurance based systems do not exist on a national scale and therefore this gap currently remains. Innes and Straker (2002) described methods used by occupational therapists in Australia to help individuals back into work. These included rehabilitation services that included job modification, workplace modification and the provision of workplace aids and equipment. In Australia and the USA there are health care workers whose sole function is to provide vocational rehabilitation programmes (Innes and Straker, 2002; Shaw and

Polatajko, 2002). It may be of value to examine how aspects of return to work design used in the USA and Australia to support individuals back into work could be implemented in the United Kingdom.

1.9 Summary

The impact upon individuals who have sustained a traumatic hand injury can be wide ranging and can include physical, psychological and social dimensions. Difficulty for this patient group to return to work has been highlighted as a concern (Fitzpatrick, 2007) but how individuals manage to get back into work while managing a traumatic hand injury are limited (Gustafsson *et al*, 2012). The hand therapy and surgical literature often view returning to work as an outcome measure (Bruyns *et al* 2003) and it is little understood how individuals manage once they have returned to work (Butler *et al*, 1995). Literature has highlighted the need to take into consideration individuals' needs when developing treatment intervention (Fitzpatrick and Presnell, 2004) but such studies have not demonstrated how such needs can be integrated into treatment programmes. Hand therapy tends to focus upon the need to maintain the surgical repair but it has not been described how an individual can manage their hand rehabilitation programme while getting on with their usual daily activities at the same time (Gustafsson *et al*, 2012). The use of an occupational therapeutic focus could provide an opportunity to examine the hand-injured individual's needs when attempting to engage in their daily occupations whilst managing their rehabilitation programme at the same time (Townsend and Polatajko, 2013).

A focus on hand-injured patients' ability to return to work is timely as in the United Kingdom the focus of Government policy is to attempt to get people who become sick or injured back into work as soon as possible as it is argued that this can have economic and social benefits for the individual (Black, 2008). Individuals who have sustained hand injuries tend to be of working age and studies that focus upon their ability to return to work tend to focus upon whether they returned to work or not and do not examine how individuals manage their ability to manage a time consuming post-operative exercise programme and their return to work. Interventions provided by hand therapists in the United Kingdom focus on the maintenance of the surgical repair (Evans, 2012) and although literature highlights the need to include patients' perspectives in their rehabilitation interventions (Gustafsson and Ahlstrom, 2004)

work has not been done that examines *how* this can be achieved. Occupational therapy does focus upon an individual's ability to engage in daily activities (Townsend and Polatkjo, 2013) and if these principles could be applied to hand therapy interventions it may be possible to combine both requirements. Gaining insights into hand-injured individuals' experiences would help facilitate this.

In the U.K. return to work programmes currently offered to patients by occupational therapy services are localised in nature or do not exist at all (Coole *et al* 2013). An opportunity to devise new ways of assisting patient groups back into work has arisen and scope to improve such a system for the hand therapy patient population could be useful to explore in more detail. The infrastructure available to occupational therapists working in health and social care to integrate such programmes has become diminished in recent times as the focus has been on medical concerns. Models of integrated return to work programmes developed in the USA and Australia may provide some pointers to help develop such an intervention for this patient group.

Chapter two examines the relevant literature concerning issues that individuals face when attempting to return to work following a hand injury and examines the adaptive processes individuals may apply following an injury. The third chapter will describe the methodological underpinnings for the study. Reflective lifeworld research has been used with a longitudinal perspective to gain insights into individuals' experiences of getting back into work while managing a traumatic hand injury. Chapter four outlines the methods used in the first stage of the study whilst the findings are outlined in chapter five. A discussion of the findings in relation to relevant literature is in chapter six. Following the discussion of these findings, chapter seven moves on to the second stage of the study which focuses on the development of a return to work intervention based on the findings of the first stage and explains how this intervention has been piloted. Chapter eight examines the findings from the pilot study and discusses these in the context of the literature. The final chapter draws these findings together and sets out the new knowledge from this research as well as recommendations for future work.

Chapter 2: Literature review

2.1 Introduction

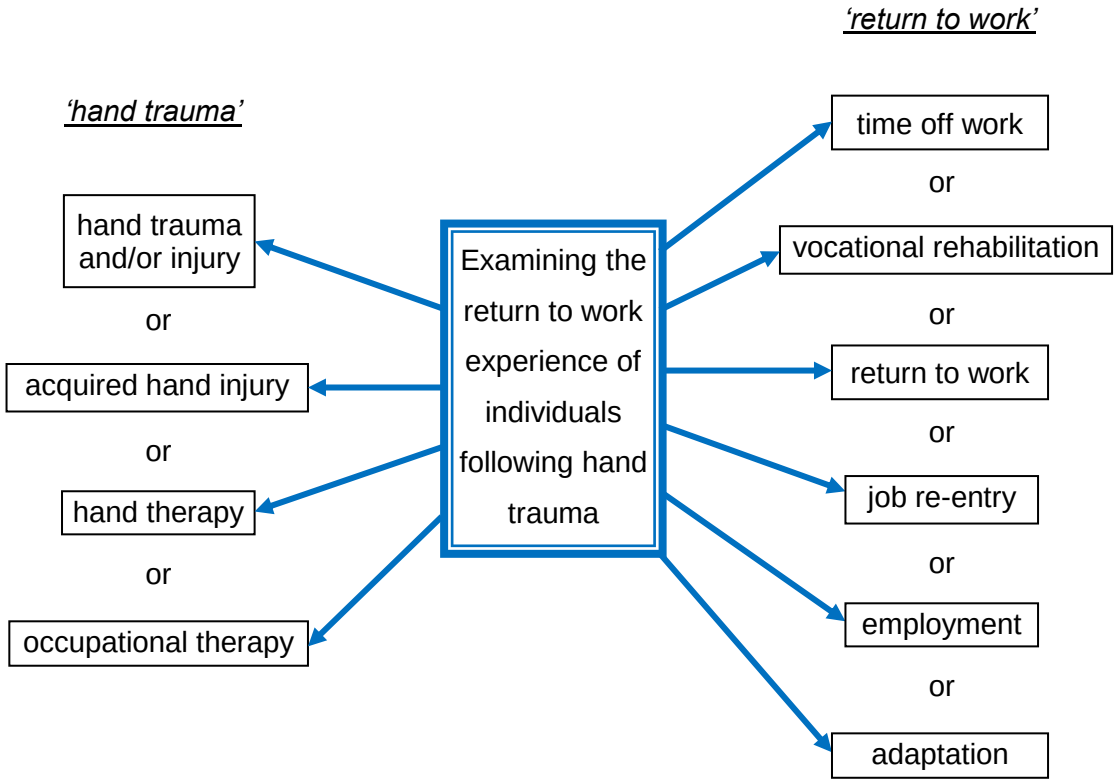
This chapter examines literature that explores the issues surrounding an individual's ability to return to work following a traumatic hand injury. Initially, the literature search strategy is described beginning with the identification and implementation of the search terms used to define the literature search. Literature is used to examine return to work concerns for this patient group and how individuals can engage with their rehabilitation interventions while attempting to get on with their usual day-to-day activities including the ability to work. As the literature review progressed it became clear that there was a need to focus in more detail on the adaptive processes that individuals may experience following a traumatic hand injury and examine how this may impact upon the ability to engage in daily activities while managing a post-operative treatment programme. Literature highlighted the fact that following a traumatic hand injury the ability of an individual to manage their injury changed over time but how the adaptive process impacted upon the ability of individuals to manage the healing process over time was not discussed. This provided an opportunity to examine in more detail literature that examined how individuals may cope and adapt following injury and why the ability of hand injured patients to return to work has been chosen as the main focus for this study. It is discussed how hand therapists may merge biomechanical treatment concerns with the adaptation process.

2.2 Literature search strategy

The purpose of this research study is to gain insights into "the return to work experience of adults following a traumatic hand injury in a United Kingdom health care setting". As there was a need to potentially include literature from different academic and theoretical disciplines (eg. hand surgery/therapy, occupational therapy, return to work literature that may include government policy documents), a scoping study was thought to be appropriate (Anderson *et al*, 2008). This approach was considered appropriate to contextualise knowledge of this subject, by gaining insights into the current state of understanding of what is known and unknown within the context of current practice with this patient group. Rumrill *et al* (2010) state that

scoping reviews "*represent a viable methodological approach that can be employed to examine the breadth of research on a particular topic*" (Rumrill *et al* 2010, p. 401), To attempt to make the literature search as comprehensive as possible key words and ideas were identified from the research topic. These key words or phrases were 'return to work' and 'hand trauma'. From these key words synonyms or alternate keywords and other phrases that described the key words were added. These words and phrases were identified by the researcher with the use of a thesaurus and then in conjunction with four occupational therapists working in the field of hand therapy at the researcher's place of work. The search terms are arranged in Figure 2.1.

Figure 2.1: Search terms: examining the return to work experience of individuals following hand trauma



These key terms were used with the assistance of a University librarian. Word combinations were used to conduct an electronic search for relevant literature pertaining to return to work following a traumatic hand injury. This was done until all key words or phrases were covered. Additional search terms, 'upper extremity' and 'upper limb disorders' were added. Column one 'hand trauma' was combined with search terms from column two 'return to work': ('hand trauma' AND 'return to work'). Wilson *et al* (2012) added that there is a need to take a flexible approach when

scoping literature. In this study, as the area of enquiry is not well defined, it became clear, as the search progressed, that there would be a need to inspect literature that examined an individual's ability to adapt following hand trauma or injury.

Comprehensive searches were performed in the following databases:

- Medline: Records searched from the 1980s onwards, from the beginning of the database.
- ASSIA (Applied Social Sciences Index and Abstracts): This database covers English language journals in applied social sciences from 1987 to date. This data base was searched for literature published from 1987 to December 2013.
- PsycINFO: Includes details of articles with abstracts from over 1300 psychology journals. Search was completed for literature published from 1990 to December 2013.
- AHMED: Allied and Complementary Medicine Database for literature published from 1995 to December 2013.
- CINAHL (Cumulative Index to Nursing and Allied Health Literature): An index of nursing and allied health journals. A search was conducted for literature published from 1983 to December 2013.

These databases were chosen to cover the social science literature, as well as medical and therapy literature, in order to ensure the search was as thorough as possible.

2.3 Return to work literature relating to patients who have sustained a traumatic hand injury

This section will consider the extent to which the literature views an individual's ability to return to work as a predictor to validate surgical or rehabilitative interventions. Bruyns *et al* (2003) in their Dutch study aimed to highlight predictors for returning to work following traumatic injuries to median and ulnar nerves and combined median and ulnar nerve injuries. Eighty four participants retrospectively completed questionnaires about their pre-morbid employment, education levels and compliance with therapy. Compliance was defined by the authors as "*being compliant to the hand therapy programme for a minimum of three months (a 'yes' or 'no' response)"* (Bruyns *et al*, 2003, p.30). The questionnaire included questions on status of employment, physical characteristics of the job, participant's level of

education, return to work and time off work. In addition, measurements of physical recovery were assessed by the authors in an outpatient setting: grip strength, nerve recovery testing and pinch grip. After one year, 59% of the sample had returned to work, the majority of workers who returned to work indicated that they were doing the same kind of job they had done before the injury. The average time off work was thirty one weeks. No significant difference was noted in time off work for those that had sustained a median or an ulnar nerve injury but those that had sustained a combined median and ulnar nerve injury took longer (forty four weeks) For individuals who sustained an injury that resulted in damage to both the median and ulnar nerves, the return to work rate was much lower at only 24%. The authors concluded that reduced grip and pinch strength was an indicator of an inability to return to work particularly with manual workers. Compliance with hand therapy programmes was found to correlate strongly with an ability to return to work. This could be considered a rather narrow indicator of an individual's ability to return to work after such an injury. The focus upon medical indicators and the need for patients to comply with their exercise programme do not take into account other possible factors. Getting back into work was considered an indicator of a successful outcome. The study did not investigate the participants' experiences or any potential problems they may have experienced once they had returned to work. It would be possible to examine how an individual engages with and is affected by the environment by using occupational therapy perspectives that provide an opportunity to examine a broader context (Townsend and Polatajko, 2013).

This study demonstrated the impact that such an injury can have on an individual's ability to return to work. Patients' ability to function in their usual daily activities as a whole was not discussed. However, by focusing on grip strength and compliance alone, the authors did not take into account the complexities of the individual's ability to manage their injury as well as their ability to return to work. The authors reported that an increase in compliance might result in better outcomes, but it was not explained how this could be achieved. The authors concluded that the ability to return to work can be predicted on the physical assessments described in this study and added that if an individual is not able to return to work due to factors not under the control of the medical team, the individual should be offered retraining or be advised to change their type of employment. No indication was given of the nature of these factors. It is argued here that it would be of interest to examine in more detail potential variables affecting return to work that are not solely dependent upon

physical factors. A focus on participants' concerns may need to be explored in greater detail in an attempt to discover if such factors play a part in an individual's ability to return to work. An assumption was made that if a participant returned to work then the outcome was a positive one. Participants were only asked if they had returned to work or not and it was not made clear what their experiences of getting back into work and being at work were.

Kasdan and June (1993) in their US study, although focusing on medical concerns, did incorporate the idea of the need to take an active part in supporting patients' return to work after suffering a unilateral hand fracture. This study compiled a case series of 556 employed patients who had sustained unilateral hand fractures. Participants were tracked on their journey back into work using information taken from medical notes. Patients' line managers were contacted by their surgeons by telephone and managers were encouraged to allow the injured workers to return to work as soon as possible. The authors emphasised the need to instigate a return to work programme as soon as possible after the injury, arguing that the benefits of being in work (financial, structure, life-role) outweighed those of being off work. They added that individuals took on average five days to return to work but were initially only able to manage modified duties and it was not until eight weeks following the injury that individuals were able to resume their pre-injury level of work. This is in contrast to the previous study (Bruyns *et al* 2003) where participants returned to work at least thirty days after sustaining their injury. This difference is most likely due to the nature of the injury but in Kasdan and June's article (1993) the treating medical team became actively involved in the return to work planning of the participants whereas Bruyns *et al* (2003) did not. Although this is an old study, it has been included as it introduced the concept that an early return to work is beneficial as well as emphasising the need to include the work place when planning such a return to work programme. It was not made clear what form the return to work plans took and it would have been interesting if participants' perceptions were included in the study as a means of broadening the findings from solely using the fact that the participant returned to work or not as an outcome measure. Such an addition would have afforded an opportunity to gain insights into what the experiences of returning to work actually entailed, which would have provided useful insights into the return to work process. A focus upon individuals' needs when developing such an intervention was not taken into account nor it was discussed how such needs could be integrated into a treatment programme. Return to work

was used as an outcome measure but the idea of a phased return was introduced. What precisely this included was not described. As with Bruyns *et al* (2003), the need to focus on return to work was discussed, but both studies were searching for medically focused predictors that, if resolved, might assist with a successful return to work. The fact that they were including the work place in return to work planning was a new direction.

Meiners *et al*'s (2005) study retrospectively explored forty individuals' job and leisure restrictions and job changes over two years after the repair of a peripheral nerve in the forearm, wrist or hand. This retrospective study used a postal survey and participants were asked to complete the Groningen Activity Restrictions Scale (Suurmeijer *et al*, 1994), a questionnaire developed to measure disabilities in Activities of Daily Living. The GARS has a minimum score of 18 points and a maximum of 72 points. A higher score indicates more disabilities. Results showed that the mean GARS score was 18.7 +/- 2.3 (standard deviation). Thirty four patients (85%) scored the minimum of 18 points. In addition, participants were asked to complete four visual analogue scales (VAS) to assess job, hobby and housekeeping related disabilities and perceived pain (VAS-pain: 0= no pain, 10 = unbearable pain, VAS-job, hobby and housekeeping: 0 = no restriction, 10 = impossible to carry out). The VAS scores were low for all measured items. Means scores above 1.0 were found for job and hobby related problems and pain. VAS-pain and VAS-hobby showed a moderate correlation with the results of the GARS (r = .53 and r = 0.59, p less than 0.001). VAS-housekeeping correlated strongly with the results of the GARS (r = 0.79, p less than 0.001) and VAS-job correlated strongly (r = 0.88, p less than 0.001). Results showed that 19% of participants were not able to return to work and that 20% could not continue with hobbies.

This study again highlighted the impact of a traumatic hand injury on an individual's ability to function, but did not draw any conclusions as to what such an injury might mean to an individual's ability to participate in their usual activities of daily living. The authors concluded that a digital nerve injury would have less of an impact on function than other upper limb peripheral nerve injuries. Results were able to demonstrate that digital nerve injuries that result in sensory loss alone did not impact as greatly as nerve injuries that included both sensory and motor deficits but again the opportunity to consider how such an injury might cause difficulty for individuals is not discussed. As with Bruyns *et al* (2003) return to work was again

used as an indicator of successful outcome. Results focused upon medical concerns; for example, that surgical repairs for this patient group should take place as soon as possible after injury and that nerve re-innervation should be followed up for longer than two years. It was interesting that the authors asked participants to complete scales that focused on their ability to participate in daily activities and the results gained were used describe the potential impact of a nerve injury. This could prove useful when anticipating potential functional needs and difficulties for patients, however, by exploring patients' perspectives in more detail and including them in the development of rehabilitation interventions may provide an opportunity to provide rehabilitation interventions that include the needs of the hand injured patient as well as the healing structure. There is an assumption that function will resume if surgical techniques can be improved.

Skov *et al* (1999) in their Danish study aimed to identify prognostic indicators for the amount of time taken off work following a traumatic hand injury that occurred while at work. Highlighting these prognostic factors allows doctors to concentrate rehabilitation interventions to help resolve them. Skov *et al* (1999) reviewed questionnaires that had been sent to 1022 patients who had been reviewed in their A&E departments. The aim of the questionnaire was to obtain information about the period of time off work and to identify variables which might influence the duration of time off work. They received 802 responses. They found that over half of the patients with hand injuries took time off work, the average time being 6.1 days (range 0 – 180). Twenty five per cent of patients who took time off work were off for more than ten days. Prognostic indicators for being off work for a prolonged time included:

- amputations as well as injuries to bones, joints, tendons and nerves,
- physical symptoms, such as pain and decreased finger movements,
- patients who had sought advice from doctors took more time off than those who did not and
- presence of flash backs.

As would be expected individuals who suffered amputations as well as injuries to bones, joints, tendons and nerves (as opposed to soft tissue injuries) were out of work for the longest periods of time, as were patients who experienced pain and decreased finger range of movement. The fact that some patients delayed their return to work once they had taken advice from medical staff warrants further

consideration as it would be of interest to gain insights into the reasoning given as it may provide new ways of providing return to work information that may be useful for hand injured patients. It is possible that once the participants became aware of potential realities of being back at work their decisions were altered. Skov *et al* (1999) discussed that this was because doctors would often tell their patients to return to work only when they are completely better. It would have been interesting to know which patients with what conditions were advised not to return to work by medical staff and to compare the assumptions of the medical team with the perceptions of the patients. It may be, for example, that injuries considered not serious by the medics may prove most challenging to the patients involved.

The need to initiate return to work programmes and include work colleagues in such programmes was emphasised (Skov *et al,* 1999), but what form the return to work plan would take was not developed. Barriers identified in the return to work process following a traumatic hand injury focussed upon the need to improve surgical techniques and the need to adhere fully to therapeutic programmes. Patients' perspectives about their return to work needs were not discussed or considered. Again, whether or not an individual returned to work was used as an outcome measure in its own right without further exploration of this process. This study has demonstrated that many patients go back to work within a week of injury even with serious injuries. It was not discussed why this may have been the case and it would be of interest to examine this in more detail. This pattern of behaviour should be accounted for when developing treatment protocols and planning return to work programmes.

The literature so far has discussed the importance of getting an individual back to work following their injury. The assumption is made that if a constituent part, such as reduced grip strength (Bruyns *et al,* 2003), is found and repaired; the ability to go back to work would follow. This assumption is firmly rooted in the medical model. There is an emerging awareness of the need to include patient concerns in treatment intervention, but such concerns have not been extensively explored. The need for patients to comply with their treatment intervention is highlighted and it is argued that the medical outcomes would be enhanced if patients complied more rigorously with their exercise regimes, but the question arises as to what obstacles affect patients' ability to engage fully in this process.

Baril *et al* (2003) in their Canadian study described the multifaceted nature of the return to work process. Their study explored the perceptions of many different actors involved in the return to work process and studied their views on barriers of this process across three Canadian provinces. A combination of in-depth and semi structured interviews as well as focus groups was used to collect data. The study demonstrated that those involved in the return to work process can be wide ranging and the authors separated them into three groups; 1) injured workers, 2) other actors in the workplace (colleagues, line-managers, managers) and 3) those external to the workplace (family, work compensation boards, insurance companies, GP and other health professionals). The interplay between these various groups often impeded the return to work process. For example, doctors may prescribe 'light duties' but it might not be clear to the worker, his line manager or colleagues exactly what 'light duties' means, often resulting in confusion. The importance of trust, respect, communication and the need for good relations between the various agencies involved in the return to work process were highlighted.

This Canadian study identified that once an individual who is in work becomes sick or injured and is unable to work as a consequence, their ability to get back into work does not solely depend upon a positive resolution of their medical problems alone but can become complicated by potentially many other people, such as family and managers. Medical concerns, although important, only focus upon one aspect of the healing process and there is a need to include patients' perspectives when considering what may be involved in the return to work process. Gaining deeper insights into an individual's return to work journey following a traumatic hand injury may allow for novel ways of assisting this population back into work. As a Canadian study the use of insurance companies and work compensation boards are included in the 'actors' involved in the return to work journey in this study but they do not exist in that form in the United Kingdom.

Ramel *et al* (2013) in their Swedish study explored factors influencing return to work for people who had sustained serious hand injuries. Forty adults who had sustained a severe hand injury completed a self-administered questionnaire, the Hand Injury Severity Score (Campbell and Kay, 1996) one year after their injury. This scale has been developed to classify the severity of a hand injury and for this study those injuries that were classified as 'major hand' injuries were included. The authors emphasised that problems concerning return to work are separated into individual

concerns and the work environment. The findings of the study concluded that a person's ability to return to work is not simply related to the injury that they have sustained. This is an example of return to work literature that highlights the need to take each person's individual perspectives into consideration as *"it is not the severity of the injury that is impeding their return to work it is more their ability and motivation"* (Ramel *et al,* 2013, p.466). This research marks a move away from solely focusing upon the injury as the main obstacle to returning to work, although it may be important to recognise that the type of work such hand injured individuals may have may also have an impact on their ability to return to work. Various jobs would have specific challenges and potential obstacles that are particular to each individual. The authors added that there is a need to examine the context of the return to work process and that individually developed return to work plans should be integrated into their usual treatment programme.

Lucia *et al* (2010) added that it is not the injury alone that impedes an individual's ability to return to work. They highlighted the fact that hand therapists can play a role in developing return to work programmes for this patient group. The authors did not describe how such plans could be developed or implemented. A key point of interest considered in this study was that the injury alone may not be the only factor to take into consideration when contemplating return to work for this patient group. It might be interesting to examine the nature of the individual's work and explore how the workplace might be modified to enable the hand injured individual to get back to work. The need to focus upon the environment rather than the nature of the injury was identified.

Literature identified an assumption that if an individual has returned to work the hand rehabilitation process has been a successful one. There have been few investigations into the experiences of individuals once they have got back into work. The need to explore the individual's perspective is highlighted as the literature suggests that return to work in itself is not the whole story.

Little is understood about the experiences of hand-injured individuals once they have returned to work. Butler *et al* (1995) attempted to examine the experiences of being back in work for individuals with musculoskeletal injuries in general, not specifically those with traumatic hand injuries. The authors conducted a survey that included all workers (around 11,000) who were examined for permanent disability

assessment by the Workers Compensation Board physicians in Canada over the course of one year. The survey instrument collected information on: workers' time-of-injury and post injury employment histories, the medical and rehabilitation services received following the injury, as well as the amounts and sources of income received since the injury.

Butler *et al* (1995) made the point that it is important for employers to manage return to work and that employers may not have the necessary information that would allow them to provide this successfully. An important implication of this study for the management of disability is that, except in the most severe cases, the direct physical effects of injuries do not completely determine whether or not an injured worker returns to stable employment. Instead, patterns of post-injury employment are determined by the ability of the employer to accommodate the injured worker, the worker's ability to adapt to their new circumstances and the limiting effects of the injury. They concluded that there is a need to widen the focus of return to work studies to include patient insights that measure the influence of work environments and employers' insights into managing injured employees.

Research that uses return to work as an outcome measure understates the complexity of the problems faced by people returning to work post-injury and overstates the success of current efforts to return injured workers to employment. If Butler *et al* (1995) only considered whether an individual returned to work or not, they would have concluded that 85% of the Ontario workers recovered from their injuries because they returned to work. In fact they showed that by assessing them once back at work, almost 60% of those who returned to work had one or more subsequent injury-related work absences. Forty percent of the workers who initially returned to work were not employed one year later because of the effects of their injuries. This demonstrated that, in reality, only half of the injured workers successfully returned to work. For this reason, it would be helpful to look beyond the initial return to work with hand injured patients as this study highlighted that although the initial return to work rate was high it could be concluded that many participants experienced difficulties managing their work-tasks once they had returned to work. As a result, it could be argued that returning to work may not necessarily be viewed as a sign that medical and rehabilitation interventions had been positive. This study examined individuals that had experienced musculoskeletal injuries. It would be of interest to examine experiences of hand injured individuals once they had returned

to work as gaining such an insight might provide an opportunity to examine if getting back to work can be viewed as a successful surgical outcome. The use of the hand has cultural and social significance (Bowers and Tribuzi, 1992) and this may also have influenced the decision making processes of the participants concerned.

Amick *et al*, (2004) in their U.S. study examined 197 adults' ability to return to work following carpal tunnel surgery. They looked beyond the individual returning to work to examine the clinical, individual and workplace predictors of successful work role functioning. The authors concluded that people may return to work before their surgical repair is fully healed as, amongst other reasons, they may have used up their sick-pay allowance. They noted that individuals, despite returning to work, may still be experiencing difficulties as a result of weakness, pain or medication effects. These participants were followed for six months after surgery. This study identified that participants were able to fulfil their work role requirements at two months following surgery, with the exception of those experiencing depression or those involved in a workers' compensation claim. A supportive employer proved vital in assisting a positive return to work role functioning. Gustafsson and Ahlstrom (2004) concurred with this view in their Swedish study, which aimed to explore any consequences of an acute traumatic hand injury experienced by people a year after their trauma. At the end of the year, the results showed that participants experienced a significant improvement of their daily functional ability during the first three months but no change was noted from between three months and one year. Functional limitations described, bore no relationship to the type of injury, location of the injury or whether the dominant hand was injured; although blue-collar workers experienced greater functional limitations than white collar workers. In most cases, pain decreased during the first three months and again no significant change was reported between three and twelve months. During the first weeks after the injury, nearly half of the participants avoided looking at the hand when the dressings were changed. At the end of the year they were generally less troubled by the appearance of the hand although a third still felt uneasy when looking at the hand after a year. Symptoms of intrusion and avoidance decreased during the first three months but, as with the patients' earlier responses about their functional ability, no significant change in avoidance occurred between three months and one year. With regards to the impact on mood again this was at a higher incidence in the first few months post injury. In ten percent of cases signs of mood disorder occurred at the end of the year.

About half of the participants had returned to work before three months post injury, but 16% of them were still on sick leave at the end of the first year. Some of those that had returned to work reported that work was more difficult to do than before the injury. The participants who had returned to work reported similar difficulties following their hand injury as those who were off sick for the year. The authors concluded that this meant that the ability to work is not enough of a measure of outcome of an acute traumatic hand injury. In conclusion, it appeared that problems experienced by this patient group decreased during the first three months, and the remaining symptoms tended not to change during the rest of the year. This may suggest that at three months it is possible to identify patients in need of long-term support. The authors concluded the need to widen the type of treatment intervention offered to this client group by not solely focusing upon medical concerns alone.

These studies (Butler *et al*, 1995, Amick *et al*, 2004 and Gustaffsson and Ahlstrom, 2004) demonstrate the need to look more widely when examining individual's ability to function and return to work while managing a traumatic hand injury. Environmental factors will often have a greater impact on an individual's ability to return to work than those caused by the injury itself. In addition it was evident that some patients were returning to work before the repaired structure had fully healed. It was not explained further than any medical concerns why this may have been the case.

2.4 Engaging with rehabilitation

2.4.1 Compliance with rehabilitation interventions

Ideally, compliance with post-operative therapy programmes maximises the chance of the repaired structure regaining its premorbid function (Peck *et al*, 2014). However, the reality of individuals' lives often impacts on their ability to fully comply. For example Amick (2004) found that patients returned to work before the repaired structure was fully healed from surgery. How patients interpreted or merged their intensive treatment programme with the needs of their job was not discussed and although the need to include patients' concerns in rehabilitation interventions was highlighted, studies do not demonstrate how this can be done. Therefore, further consideration needs to be given to investigate what patients' reasons are for non-

compliance with these programmes within the context of their ability to get on with their lives. Thus, there is a need to examine how individuals' ability to comply with their treatment and ability to get back to work can be supported. The following section will consider these issues in more detail.

Steward (2004) reviewed the literature on compliance with hand therapy treatment programmes. In hand therapy, compliance with splint wearing regimes, exercise regimes and attendance at outpatient hand therapy appointments are considered central to good outcomes (Lyngcoln, *et al* 2005). In contrast, a central concern of occupational therapy is to involve individuals in the development of rehabilitation interventions (Townsend and Polatajko, 2013). Steward (2004) emphasised this view and attempted to broaden the scope of examining compliance and incorporated patients' concerns when developing rehabilitation interventions. Steward (2004) proposed that the term 'concordance' rather than 'compliance' be adopted to indicate the change in emphasis by including patient concerns in the development of rehabilitation interventions. Steward suggested that patients' beliefs can be understood through dialogue and active listening and highlighted the need to "*adopt less a notion of rational non-adherence, more one of intelligent non-compliance*" (Steward, 2004, p.90). In addition, when attempting to get patients to comply with their post-operative rehabilitation programme, the reasons why patients are not following their rehabilitation programme are not considered (Steward, 2004).

Steward (2004) concluded that although client-centred approaches and education are important aspects of gaining users' participation, patients need active encouragement and real opportunities to become involved in their rehabilitation plan. This could allow them to engage more fully with their rehabilitation programmes in the context of their everyday lives including their ability to return to work. Gaining deeper insights into their lives and then by providing treatment programmes that take such insights into account may be a means of enabling patients to manage their exercise programme in the context of their daily lives. This approach may make interventions more realistic and achievable for patients to manage their injury and their day-to-day lives concurrently.

2.4.2 Incorporating patient priorities in rehabilitation interventions

Case-Smith (2003) proposed that, following surgery, rehabilitation interventions following a traumatic hand injury should include both medical considerations and the individual's functional performance:

"... the occupational therapist may address physiological issues (e.g. pain, stiffness, edema, tissue healing, scarring) using physical agent modalities, splinting, manual techniques and individually designed activities focussing on the clients functional goals" (Case-Smith, 2003, p.499).

Such a change in emphasis from outcomes that support medical interventions alone to ones that became more patient-centred was reflected by the publication of the International Classification of Functioning Disability and Health (ICF) by the World Health Organisation (WHO) in 2002. The ICF provided a three-level conceptual model for evaluating the impact of all health and ill-health states on the individual. The ICF model conceptualised the impact on health in terms of an interaction between several interrelated and non-hierarchical domains of concern: body functions and structures; activity and performance areas; and environmental (as well as personal) influences. This process of systematic interaction replaced the previous International Classification of Impairments, Disabilities and Handicaps' (ICIDH's) notion of a linear relationship, where impairments produced disability and as a result handicaps. This conceptualisation broadened the idea of outcome from a medical perspective alone and allowed an opportunity to take into account other factors that may impinge upon an individual. Fitzpatrick and Presnell (2004) illustrated this by showing with three short case-histories that although all three individuals had suffered the same traumatic hand injury the impact on their lives was widely different due to their personal circumstances. It is these 'personal circumstances' that could provide greater insights into each individual's needs and could allow for the provision of more patient-centred, occupational therapy interventions as opposed to interventions that solely focus upon the medical perspectives of the healing of repaired structures.

2.4.3 Managing rehabilitation interventions

Metcalf *et al*, (2007) completed a review of 25 clinical upper limb assessments used in musculoskeletal care and presented a comparative review of each using the International Classification of Functioning Disability and Health (WHO ICF, 2002) as a means of providing a relative summary of purpose for each assessment. These assessments were categorised by their main focus; body functions and structure, activities or impact upon social participation and whether the assessments are subjective or objective in nature. The authors concluded that "*historically, the emphasis when selecting an appropriate upper limb assessment has been on assessing limitation and impairment of function; a more positive approach in the future, focusing on ability and participation, would ultimately benefit the patients and maximise their potential for recovery*" (Metcalf *et al*, 2007, p.170). Therefore there is a need to explore patient concerns in more depth and to include them in treatment plans.

As engagement with treatment is a key point of any treatment plan, a brief review of literature exploring patients' ability to adhere to exercise programmes for musculoskeletal injuries is presented. Examining patients with chronic neck and lower back pain, the ability to adhere with exercise programmes was inspected by Medina-Mirapex *et al* (2009). Focus groups were used to examine thirty four participants' beliefs about the need to comply with their prescribed exercise programme. Participants reported that they were most likely to do their exercise programme when experiencing pain, but this compliance would stop once the symptoms of pain subsided. In addition, individuals' beliefs about the future prognosis had an impact upon their compliance with their exercise programme: if it was expected that their pain was unlikely to ever resolve, participants became resigned to this and the chance of them doing their exercise programme lessened. Dean *et al* (2005) interviewed nine patients with chronic back pain who were undergoing an outpatient physiotherapy programme. Participants in this study reported difficulty in finding time to do the exercises prescribed for them even though they could understand that they would be beneficial. Participants preferred it if the physiotherapy team could reduce their painful symptoms to allow them to get on with their day-to-day activities and not to let their symptoms interfere in their usual routines. The study focused on how best to persuade participants of the need to comply with their exercise programme but did not examine how this might be related to their ability to return to work. Participants viewed their need to get on with

their day-to-day activities as their main priority and regarded their exercise programme as a means of allowing them to do this. This differed from the physiotherapists' perspective that, if the patient could understand the need to comply with their exercise programme, functional ability would ensue. The need to link patients' daily living needs with their rehabilitation programme may go some way to make them more relevant to the patient.

A shift away from a relationship where the therapist takes on the role of an expert expecting patients to comply with their exercise and splint wearing regime to a more collaborative one that enables patients to include their needs in their treatment programme may go some way to engage patients more fully as suggested by Steward (2004).

Harth *et al* (2008) in their German study devised rehabilitation interventions for hand injured patients that used patient goals to devise and lead treatment sessions. Their study evaluated the effectiveness of a patient-oriented, hand rehabilitation programme compared to a standard programme. A focus on functional outcomes, return to work, patient satisfaction and insurance costs were considered. Seventy five patients were recruited to two separate cohorts: one received standard biomedical rehabilitation interventions and the other included patient concerns when developing rehabilitation interventions. Data were collected at the beginning and end of rehabilitation and six months after discharge. Clinical assessments used included measurements of range of movement, grip and pinch strength. Self-reported measures were also used: pain was assessed using a visual analogue scale as well as the German versions of the SF-36 (Bullinger and Kirchberger, 1998) and the Disability of the Arm, Shoulder and Hand (DASH) (Germann *et al*, 2003). Two further scales were included that examined individuals' locus of control (Lohaus and Schmitt, 1989) and their attitudes concerning return to work. The German version of the Client Satisfaction Questionnaire (Schmidt *et al*, 1998) assessed patients' satisfaction with service delivery at the end of their inpatient treatment. In addition participants identified aspects of their work that they anticipated having difficulties with. These became a central part of rehabilitation interventions for the intervention group that put patient needs at the centre of their treatment programme.

Analysis of variance for repeated measurements was used to calculate the main effects of the DASH, reported pain measurements and patient satisfaction. Results

indicated that the participants in the group that included their needs in their rehabilitation programme did better than patients in the standard intervention group. Psychological problems were identified sooner, pain was managed better and insurance based rehabilitation managers began return to work planning while therapy was still progressing rather than waiting until discharge. The authors reported that the basis of their statistical analyses was a design matrix with two groups of patients (standard treatment and patient-centred treatment) and three time levels (t0, t1, t2). Analysis of variance for repeated measurements was used to calculate the main effects between the two groups at the beginning of their treatment (range of motion, grip and pinch strength). Results demonstrated that the participants in the patient-centred group reported better DASH outcomes although these did not reach significance level. Of particular importance are the significant improvements with regard to pain, satisfaction with treatment delivery, and satisfaction with functional outcome. More patients returned to work sooner and took less time off work. In the United Kingdom, it would be unusual for treating occupational therapists to have access to a clinical psychologist, a medical rehabilitation team or formal health insurance-led rehabilitation interventions but the premise of including patients concerns is important. This was the only study that was found that included patient concerns. The study by Harth *et al* (2008) takes a client-centred approach to providing hand therapy rehabilitation interventions but it used mainly quantitative methods and did not focus upon the experiences of the participants.

2.5 Adaptation following trauma

Looking at the process of adaptation, (how patients' perception of their injury changes over time) could provide an opportunity to gain new insights into how this adaptation process may impact on an individual's ability to engage with their hand injury during the rehabilitation phase. The ability to return to work while engaging in this rehabilitation programme needs to be considered. According to the Canadian Model of Occupational Performance and Engagement (Polatajko *et al*, 2007b, Figure 1.1) the individual has the ability to adapt and acquire skills and to get a sense of what it is like to return to work following a traumatic hand injury. It is, therefore, important to explore the changing and unique nature of the individual's perspectives. To enable individuals to engage with their treatment programmes it would be of interest to examine how an individual may adapt to their injury over

time. Being aware of the adaptation process may enable occupational therapists to provide a more dynamic intervention that is in step with patients' needs. An examination of the wider literature on adaptation may provide further insights which could have a bearing on hand therapy interventions. Adaptation is viewed as a central concern in the occupational therapy literature. Kielhofner (2008) defined adaptation as the "*extent to which persons are able to develop, change in response to challenges or otherwise achieve a state of well-being through what they do*" (Kielhofner, 2008, p.106). Being aware of individuals' experiences throughout the rehabilitation process may provide an opportunity to direct rehabilitation interventions in a way that is more meaningful for the patient and to provide an opportunity to respond to their potential needs.

Literature that examines people's psychosocial adjustment to acquired injuries has led to the development of different types of explanatory models. Some models suggest that adjustment follows a series of progressive stages. One early example of a linear model is Kubler-Ross' (1969) model of bereavement. The original model suggested that individuals pass through a number of stages in the process of adjusting to a loss: shock/denial, distress and acceptance. In order for an individual to progress through successive stages one must first process emotions and cognitions involved in previous stages. Models that are linear in nature have been criticised in the literature as being purely descriptive and not taking into account patients' individual experiences (Livneh and Parker, 2005). Warchal and Metzger (2005) added that complex factors experienced by an individual (e.g. premorbid personality factors such as resilience, problem solving, and coping) need to be considered and do not fit neatly into a stage model. Stage models can be useful in helping to describe a range of possible emotions experienced by an individual, but are of limited use as emotions do not follow a linear pattern and the experiences highlighted cannot be generalised to other people. Warchal and Metzger (2005) argue that an individual moves back and forth between emotional states many times during their recovery in response to their experiences. Social and environmental factors related to the disability appear to be the main source of difficulty rather than the disability itself. As a consequence, an individual may not experience depression or anger until faced with a social or environmental complication as a result of the disability.

Livneh and Antonak (1997) described an adaptation model for individuals who developed chronic illness or disability. Their stage based model argued that an individual would move through the following stages:

1) early reactions of shock, anxiety and denial,
2) intermediate reactions of depression, internalised anger and externalised hostility and
3) reactions of acknowledgement and adjustment.

Kendall and Buys (1998) note that Livneh and Antonak's model (1997) is *descriptive* rather than *predictive* as it fails to identify any motivating force behind the generally recognized movement toward adaptation. Kendall and Buys (1998) add that adaptation is a subjective process and that significant variation exists across individuals in the adaptation process. Livneh (2001) later revised their stage model to include individual variables. These included social-demographic variables, disability-related variables, personality attributes, and physical/social environment variables. The comprehensive nature of their interactive model shows that psychosocial adaptation is a highly complex and individual process**.** This model suggests that a variety of personal, social and environmental experiences continuously interact throughout the adaptation process. It provides a framework with which to explore the impact of these experiences on the lives of an individual. The process of adaptation allows a focus upon adaptive coping skills, to take on board the individual's personal meaning attached to their injury and to highlight environmental barriers which can perhaps then be modified or removed.

However, stage models do not take into account how individuals' perception of themselves and their world affects their ability to come to terms with their new situation. Kendall and Buys (1998) highlight that "*the individual's personal and subjective analysis of his or her total situation appears to be the most important factor in guiding his or her response*" (Kendall and Buys, 1998, p.19). From this we can see that people's views and experiences have a significant impact on the process of adaptation and that this occurs over time. Kendall and Buys (1998) call for longitudinal research to capture insights about how individuals refocus understanding of their ability to engage in their new circumstances over time.

The need to focus on individual perspectives when examining adaptive processes has been highlighted. Schkade and Schultz (1992) and Schultz and Schkade

(1992), coming from an occupational therapy background, argued that the specialisation of health care has meant that occupational therapists are unable to treat the person as a whole, and the authors felt that such specialisation was a departure from occupational therapy's holistic perspective. To counter this, they developed a theoretical perspective, occupational adaption, which emphasised the fact that individuals naturally engage in occupations and acquire adaptive processes to allow them to do this. When an individual becomes disabled, the adaptive processes they had developed to allow them to live prior to their disability are no longer sufficient. Schkade and Schultz (1992) focus their theoretical model on improving an individual's ability to adapt to their new situation. The assumption is made that by gaining insights into an individual's adaptive processes, improvements in the ability to function will follow rather than assuming that focusing interventions on function will allow an individual to adapt to their new situation. The understanding of an individual's adaptive processes and the inclusion of these in rehabilitation interventions makes the treatment intervention more patient centred. Such a patient centred approach may allow patients to manage their environment and increase their ability to adapt. Jack and Estes, (2010) in their case study, developed this idea and argued that the focus should not only be upon biomechanical concerns but that the patient's concerns should be incorporated in rehabilitation interventions to help them adapt to their new circumstances. Including patient's needs, while gaining insights into how they adapt over time, will offer an opportunity to provide more holistic rehabilitation interventions that are relevant to this patient population.

2.6 Adaptation following hand injury

In order to provide more patient centred interventions, it is important to know how patients cope with, and adapt to, their new circumstances following traumatic hand injury as it may provide an opportunity to gain new insights into how individuals' adaptation process may impact on their hand rehabilitation process. This section will explore hand therapy literature that examines the adaptation process. Interventions not only have to take into account individuals' ability to engage in their usual daily activities but also how such abilities may change over time. The need to include individuals' perspectives when developing hand therapy interventions may support them to engage more fully.

Gustafasson *et al*, (2003) in their study in Sweden wished to gain insights into the various coping strategies that individuals used in the early stages following an acute traumatic hand injury. They defined coping strategies as "cognitive and behavioural efforts to manage psychological stress" (Gustafsson *et al,* 2003, p. 595). A total of 20 patients with acute traumatic hand injuries were recruited from a Swedish hospital, selected using purposeful sampling over the course of fourteen months. Participants were interviewed from between eight and twenty days post injury at the first clinic appointment post-surgery. A modified model of grounded theory was used (Strauss and Corbin, 1990) to analyse interviews. The text was searched for coping related terms and identified and analysed. Then interview text passages related to coping were identified and coded with regard to how stress factors or resulting emotions were managed (Gustafsson *et al*, 2002). Eleven different coping strategies were identified in the interviews. It was noted that patients tended to play down the seriousness of the situation by 'comparing with something worse', 'positive thinking', 'relying on personal capacity', 'distancing' and 'distracting attention'. Other coping strategies used were 'accepting the situation', 'seeking social support', 'maintaining control', 'solving practical problems by oneself', 'pain-relieving actions' and 'active processing of the trauma experience'. The authors pointed out that it may be difficult to evaluate how the findings could be used in everyday rehabilitation interventions, but highlighting these patient coping strategies gives insight into thought processes in an overt way and could provide a method of informally monitoring an individual's ability to adapt to their present situation. The fact that individuals employ various coping strategies once they have sustained a traumatic hand injury is interesting as it may provide a process of enquiry that examines how individuals adapt their coping strategies over time. Gustafsson *et al* (2002) focused on individuals' coping strategies immediately after their injury. However, it would be interesting to examine literature that focuses upon the patient's ability to adapt to their new circumstances following a traumatic hand injury over time, as new insights may be forthcoming that might highlight new ways of including patients' concerns in treatment processes.

Grob *et al* (2008) completed a literature review that examined the psychological impact of severe hand injuries upon a person's self-image. The authors concluded that the degree of disability resulting from severe hand injuries is determined by the patient's perception of the loss, acceptance of the hand and their ability to adapt. The recovery process following a hand injury is an evolving one. The authors laid out a three stage model of the adaptation process: functional acceptance, cosmetic

acceptance and emotional acceptance. They go on to state that the nature of adaptation is unique to each individual outlining that “the process of developing reasonable hopes for the future involves a balance between limits and possibilities, as they are discovered by the patient through experience” (Grob *et al*, 2008, p.360). The idea that recovery is an evolving process and that people with traumatic hand injuries follow a period of adjustment over the course of their rehabilitation highlights the need to gain insights over the course of the patient’s rehabilitation programme.

Chan and Spencer (2004) proposed to illustrate ways of studying how an individual adapts to their hand injury and viewed adaptation as an evolving process on the way to recovery. They described a holistic study of the adaptive process in hand injured patients over the course of a year following their injury. A longitudinal research design that integrated qualitative and quantitative methods was used. The longitudinal nature provided an opportunity to explore participants’ experiences over the course of their rehabilitation process. Five participants were selected to compare similarities and differences in physical recovery and psychosocial adaptation, engagement in occupations and relationships, perceived outcomes and expectations and adaptive problems and strategies as they evolved over time. The outcome measure used was the Disabilities of the Arm, Shoulder and Hand (DASH) (Hudak *et al*, 1996). Psychosocial adaptation was documented using the Reactions to Impairments and Disability Inventory (RIDI) (Livneh and Antonak, 1991). Participants were interviewed at monthly intervals while receiving hand therapy and quarterly after that for up to one year post injury. Participants initially expected their hand to regain its premorbid level of function, but over time they came to realise that although this would not be the case, they would still be able to engage in their day-to-day activities (including the ability to work). Results highlighted the need to include patients’ goals and concerns when developing rehabilitation interventions. They added that hand therapists play an important part in helping patients adapt by helping them shape realistic expectations of future levels of function but they did not discuss how this could be done. This does not occur in a vacuum; others, such as family and friends will all have an important part to play in the adaptation process. The focus on return to work was broad and consequently did not examine in detail what this journey entailed; however, this study was useful in exploring the ability of an individual to adapt to their injury.

Strong (2005) conducted a mixed methods study that explored how individuals adapt to their new circumstances following hand trauma. All participants were in a full time job at the point of injury. Participants completed the Disabilities of the Arm, Shoulder and Hand (DASH) questionnaire and the Work Environment Scale (Moos, 1981) and qualitative interviews both at the initiation of therapy and four months after returning to work. Results demonstrated that individuals adapt over time to their new found situation; that this ability to adapt is linked to their satisfaction with their work, if they engage in hobbies or have meaningful relationships. The study highlighted the need to take into consideration that individuals do adapt to their new circumstances following an upper limb injury and that it would be beneficial for treating therapists to take this into account when devising rehabilitation interventions. It was made clear that each individual's adaptive process would be unique as the perceived impact as well as their priorities would differ. This need is discussed further by Hannah (2011) who, in her review of psychosocial issues after hand trauma, added that, if treatment goals are developed with the patient, it can make the rehabilitation intervention more meaningful. Hannah (2001) added that hand therapists can play an important role in helping individuals adjust if the patient is able to be involved in their own treatment planning. Examining *how* an individual adapts to be able to participate in their usual daily occupations while managing a traumatic hand injury over time may provide an opportunity to provide an opportunity to develop a client-centred rehabilitation intervention that includes patient concerns (Schkade and Schultz, 1992; Schultz and Schkade, 1992).

2.7 Summary

Sustaining a traumatic hand injury can have a significant and wide ranging impact on an individual's life (Gustafsson and Ahlstrom, 2004). Following such an injury, individuals may report difficulties with day-to-day function, problems with mood, pain and the ability to work. There is a need to provide interventions that enable an individual to engage with their usual activities in tandem with their healing and rehabilitation process (Steward, 2004, Townsend and Polatajko, 2013). Occupational therapy literature (Polatajko *et al*, 2007a) has argued that individuals have the ability to adapt and acquire skills and gaining insights into the adaptive process may provide an opportunity to develop treatment that can include patients' concerns. This could provide an opportunity to move away from focusing on purely medical concerns. Meiners *et al* (2005) argued that if the damaged structure of the

hand/upper limb was repaired then a return to normal functioning would resume (Meiners *et al,* 2005). Bruyns *et al* (2003) contended that, if a specific factor impeding an individual's ability to get back to work (e.g. reduced strength) could be identified and resolved, a return to work would be possible (Bruyns *et al,* 2003).

Medical concerns play a central role in the rehabilitation of an individual following hand trauma, but studies that explore individuals' experiences (e.g. psychological, social and physical impacts) following a traumatic hand injury have broadened the scope of research for this patient population (Hannah, 2011). It has been noted that the process of returning to work is influenced by how the individual relates to others including family, colleagues and line managers.

Butler *et al* (1995) and Amick *et al* (2004) found that the process of disruption can continue for many months following a return to work. Whilst some difficulties are directly due to the injury, other difficulties experienced are due to the lack of understanding by line-managers of how best to accommodate returning workers during the process of attempting to manage a traumatic injury while getting on with their usual day-to-day lives (Baril *et al*, 2003).

In addition, it was demonstrated that individuals themselves are rarely aware of their rights and responsibilities when having to take time off due to injury (Curtis, 2003). This may play a major role in the ability of patients to engage in their rehabilitation process and it is an area that needs to be examined further. Enabling individuals to remain in or get back to work as quickly as possible has been demonstrated as being good for both the health of the individual and for society at large (Black, 2008).

It has been demonstrated not only that patients adapt to their new hand injuries over time, but also that this process of adaptation is specific to each individual (Chan and Spencer, 2004; Strong, 2005). Strong (2005) emphasised the need for therapists to be aware of this adaptation process when devising rehabilitation interventions. In-depth exploration of an individual's journey back to work while they are adapting to their new situation may offer useful insights that could provide new ways of working with this patient group. Such understandings could provide an opportunity for occupational therapists to devise rehabilitation interventions that include patients' perspectives. Understanding the potentially varied processes involved over the course of their return to work journey could allow for the development of

interventions that include both the medical and social dimensions encountered by individuals. Acknowledging such concerns may enable therapeutic interventions to be more meaningful and realistic in order to support patients in adapting to the realities of their new situation.

Literature for this patient group has highlighted the fact that the impact of sustaining a traumatic hand injury can be much more wide ranging than simply the need to manage the injury (Gustafsson *et al* 2012). It has also highlighted the need to include patients' perspectives in the development of hand therapy interventions (Lucia *et al*, 2010) but studies have not been forthcoming that have demonstrated how this can be done.

2.8 Gaps in the literature and aims of the study

From the literature review, it is apparent that there are areas in need of further exploration. Hand therapy literature has highlighted the need to include patients' perspectives in the development of rehabilitation interventions but no study has demonstrated how this may be achieved. Most of the studies reviewed were quantitative and from the medical or rehabilitation workers' perspective. Few were qualitative studies which focussed entirely on patient experiences. Getting back into work following an injury or disability is viewed as positive for both the individual and society at large but it is unclear how a hand injured individual is expected to manage both their rehabilitation programme while getting back to work. Getting back into work is assumed in clinical practice to indicate that hand therapy interventions were successful; however, no literature has examined the experiences of hand injured individuals once they returned to work to understand if this was the case or not. The ability to adapt to new circumstances following a hand injury was highlighted in the literature, but the process of adaption (how an individual adapts to their new circumstances over time) was not made clear. Gaining such insights may highlight any potential factors that enable or impede a successful transition back into work.

Some of the key issues are identified below:

1) Little is understood about the impact upon an individual of attempting to make a return back into work while having to take on board the skills required to manage the healing process of the damaged structure(s) in the hand.

2) Medical treatment and therapy end for this patient group at the point of discharge from hospital services. As a result little is understood about how an individual manages to do their work tasks once they are back at work.
3) Examining how individuals adapt to their new circumstances while managing return to work could provide new insights that could enhance the type of rehabilitation that is provided for this patient group.
4) Current post-operative treatment offered to hand injured patients does not take into account their day-to-day functional needs and as a result it is not known if an individual manages to incorporate the rehabilitation programme into their daily life or their return to work. Most patients returned to work earlier than was recommended by treatment protocols advised.

The literature review has identified that the main focus of treatment for this patient group is on the medical restoration of the damaged structure. It has been demonstrated in the literature that individuals who have sustained a hand injury may experience psychological, physical and social effects. The need for such concerns to be integrated into hand therapy rehabilitation programmes for this patient group has been highlighted. Including occupational therapy concerns in the provision of hand therapy rehabilitation programmes could provide a means to include patient needs in the development of rehabilitation programmes for this patient group (Townsend and Polatajko, 2013). The literature review in this study has demonstrated the potential of combining insights into how an individual adapts to the new reality of managing a traumatic hand injury and their day-to-day lives. Such a focus may provide an impetus to examine new ways of providing rehabilitation interventions for this patient group. Literature discussed the potential difficulties that individuals may have with activities of daily living and the ability to get back to work was a common concern cited in the literature, with gaps in the literature highlighting that the return to work process for this patient group is multifaceted in nature. An assumption is made that getting back into work implies a positive functional outcome but it is unclear if this is the case. Thus the focus of this study is to explore how an individual may return to work while managing a traumatic hand injury. To gain further insights into this process the study was developed in two stages that aims to:

1 **Stage one**: explore in detail individuals' experiences of returning to work following a traumatic hand injury in a United Kingdom-based hand therapy department, and

2 **Stage two**: use insights gained in stage one, to develop and pilot a return to work intervention.

The first research aim shaped the methodology and methods of this study by focusing upon individuals' perspectives concerning their ability to return to work while managing a traumatic hand injury. The need to explore how individuals adapted to their new circumstances over time was considered essential to gain insights into how individuals managed their return to work journey. The findings from the first stage shaped the development of the second research aim: 'to use the findings from the first stage of the study to be used to develop and pilot a return to work intervention for this patient group'. New ways of examining how patients' perspectives can be integrated into their rehabilitation programme for hand injured patients will be discussed. The methodological perspective developed to support such a patient centred perspective, is discussed in chapter three and the detailed methods used to carry out the data collection and analysis are given in chapter four.

Chapter 3: Methodology

3.1 Introduction

This chapter describes the methodology adopted to address the research aims developed from the literature review. A reflective lifeworld research methodology with a longitudinal perspective was used to underpin this study to explore individuals' experiences of returning to work while managing a traumatic hand injury and to use insights gained to develop and pilot a return to work intervention. The rationale for a qualitative approach is outlined before setting out a framework to describe the relationship between the epistemology, methodology and methods which has been utilised to help shape the study. The chapter then goes on to examine Reflective Lifeworld Research, lifeworld theory (based on the writings of Husserl, and Heidegger) and the incorporation of a longitudinal perspective.

The aims of the study shaped the methodology by attempting to gain insights into the less tangible meanings that patients apply to their experience of returning to work while managing a traumatic hand injury. The research methodology as developed by Dahlberg *et al* (2008) is embedded in the philosophical traditions of both phenomenology and hermeneutics. In developing this methodology Dahlberg *et al* (2008) drew on the philosophy of Edmund Husserl, Martin Heidegger, Maurice Merleau-Ponty and Hans-George Gadamer. Focusing on the lifeworld of individuals provides an opportunity to examine how implicit and tacit experiences can become explicit. It is a methodology that aims to gain a greater understanding of how an individual in this study relates to the world prior to reflecting on the experience of returning to work while managing a traumatic hand injury over time.

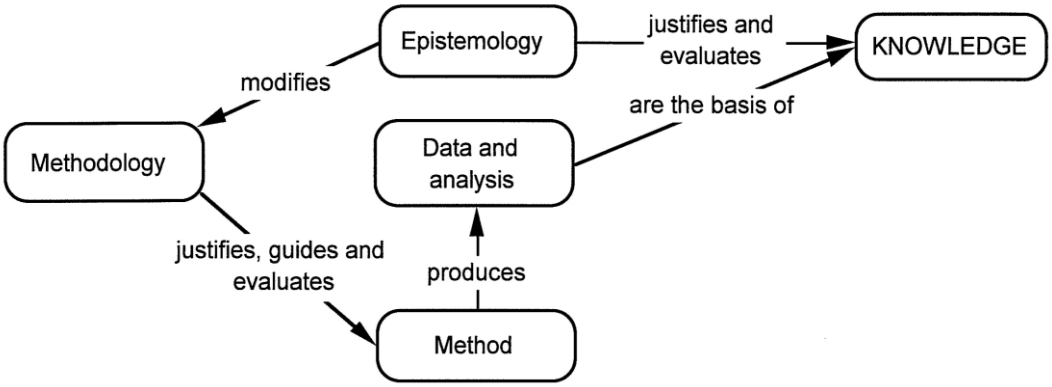
The literature review highlighted how the impact of a traumatic hand injury upon an individual can be wide ranging and includes medical, psychological and social dimensions (Gustafsson and Ahlstrom, 2004). Both returning to work and coping with a traumatic hand injury are made up of many variables and each individual's experience will be different (Hannah, 2011). An individual's ability to get back to work following a traumatic hand injury is often viewed as an indicator of a positive outcome of the treatment intervention (Bruyns *et al*, 2003). But, as health professionals' contact with patients with hand injuries ends when their medical

treatment concludes, it is not known how hand injured patients manage once back at work in a United Kingdom setting.

To gain an understanding of individuals' experiences of returning to work while managing a traumatic hand injury, a theoretical perspective was needed that would allow a clearer insight into such experiences. It was anticipated that each individual's experience would vary; therefore, a qualitative approach to research would be most appropriate as a way of capturing the meanings that may be associated with this phenomena (Crotty, 2003). McReynolds *et al* (2001) view qualitative research as a means of investigating phenomena that are not clearly understood and as an opportunity to identify variables needing to be discovered. In this study it is not clear what the experiences of individuals are or how such experiences may shape their return to work journey. Hand therapy literature concentrates upon the need to manage the healing process of the repairing structure (Evans, 2012) or the consequences, both physical and psychological, that such an injury can have for an individual (Gustafsson *et al*, 2012). It is argued here that there is a need to focus upon how an individual manages their rehabilitation programme while getting on with their day-to-day lives at the same time. Robson (2011) argued that a qualitative approach emphasises how the world "*is lived, felt and undergone by people acting in social situations"* (Robson, 2011, p.24). Such an approach was deemed appropriate for this study in an attempt to try to gain a sense of such experiences.

The development of this study is described using a framework developed by Carter and Little (2007) which outlines the relationship between the epistemology, methodology and methods and their relationship to the research aims and study design (Figure 3.1).

Figure 3.1: 'The simple relationship between epistemology, methodology and method' (Carter and Little, 2007, p.1317)



The authors argue that being overt about how a study was developed may afford an opportunity for the researcher to be innovative and could make it easier to evaluate the quality of the study (Carter and Little, 2007). Holloway and Todres (2003) argue that a "*distinctive approach does lead to greater clarity about the nature of the phenomenon to be explored, the questions posed and the way researchers answer questions and communicate findings*" (Holloway and Todres, 2003, p. 93). The intent of this chapter is to be as open as possible about how the phenomenon under investigation and the research aims directed the methodology and consequently the methods.

3.2 The lifeworld approach

Although epistemological and theoretical perspectives are influenced by the research aims, Alvesson and Skoldberg (2009) add that the ideology of the researcher is also a major influencing factor. In this study the researcher's epistemological stance has been shaped by professional background, area of work and previous research experience. As the researcher was trained as an occupational therapist and worked in the field of hand therapy for over fifteen years, the need to include patients' concerns when developing rehabilitation interventions for patients who had sustained a traumatic hand injury was deemed a central issue. Working with individuals following hand surgery allowed the direct observation of of how individuals struggled to manage their post-operative treatment programmes whilst engaging in their day-to-day activities. As a result of these experiences,

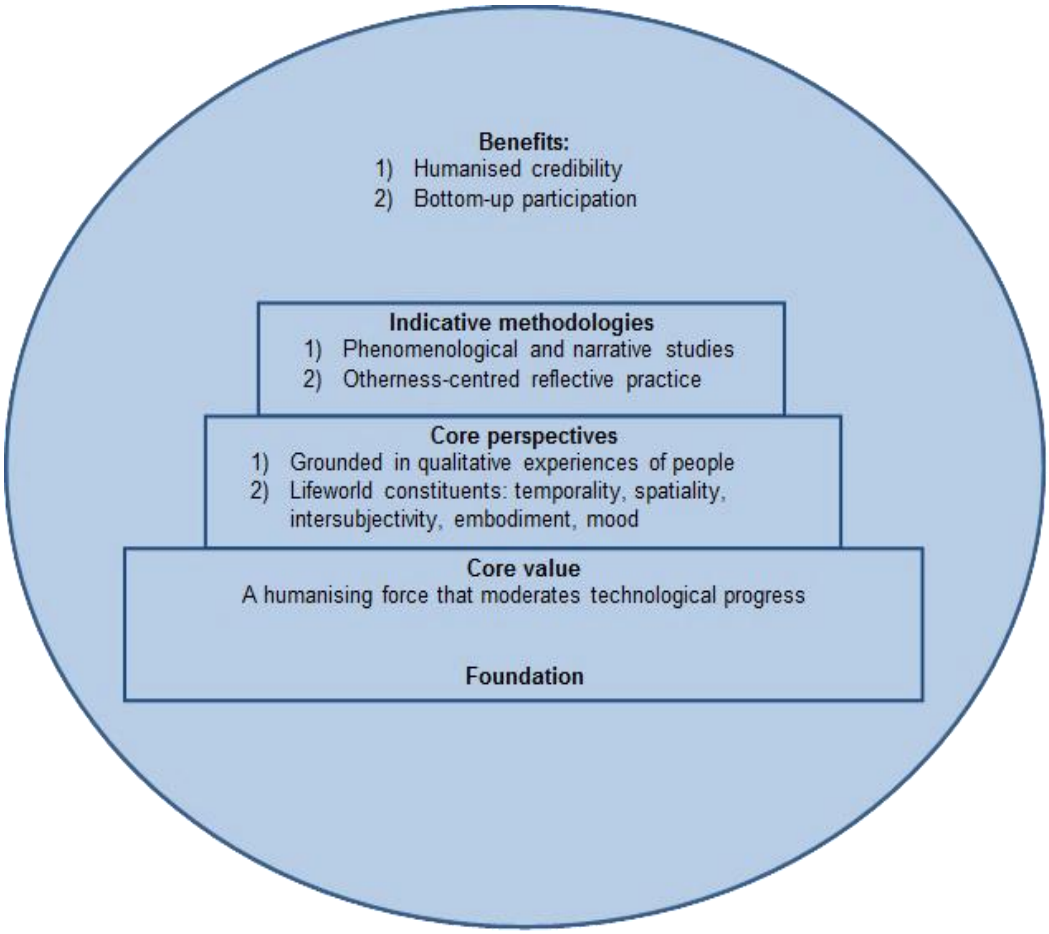
assumptions about this study have been made that have influenced the development of the research focus. Such assumptions included that: an individual's return to work journey whilst managing a traumatic hand injury would be multifactorial in nature experiences will vary from individual to individual as they adapt to their new circumstances and difficulties will be encountered once the individual is back at work.

The methodology used in this study, ie the reflective lifeworld research as developed by Dahlberg *et al* (2008), proposes that participants' lived perspectives should be prioritised and be central to the ethics of caring. It is a methodology that has a phenomenological philosophical underpinning and aims to gain a sense of the lived experience of individuals (Finlay, 2011). Such experiences are interpreted by the researcher in an attempt to make explicit such experiences and assumptions. Dahlberg *et al* (2008) added that patients' well-being should be the primary goal of health care and that it is the ethical responsibility of health care workers to promote such a goal. This approach can challenge the usual focus on the medical model in the field of hand therapy and can provide an opportunity to include patients' experiences in the development of rehabilitation interventions. Dahlberg *et al* (2008) add that individuals and their existence can never be satisfactorily understood if they are not looked at holistically. The focus upon the lifeworld of individuals provides an opportunity to gain a better understanding of meanings that individuals attribute to their experiences (Dahlberg *et al*, 2008).

Todres *et al* (2007) and Dahlberg *et al* (2009) have developed a caring sciences approach that uses insights gained from an individual's lifeworld to form the basis for rehabilitation interventions that are lifeworld-led. Todres *et al* (2007) suggested that a focus upon the lifeworld could provide a means of gaining more depth and breadth when developing rehabilitation interventions than is usually gained from case studies and accounts of people's experiences in their own words. Todres *et al* (2007) argued that although technological advances as well as increased specialisation have made great improvements in health care provision, the human perspective can often be overlooked. As a means of moderating the technical focus in healthcare provision Dahlberg *et al* (2009) proposed a conceptual framework for humanising health care to provide a focus that could guide both research and practice.

As described in the literature review, hand therapy and hand surgery literature focuses upon the technical aspects of healing and rehabilitation which can often neglect to take into account patients' needs. Hand therapy literature has written about the need to include patients' perspectives in their rehabilitation programmes (Lucia *et al*, 2010) but has not discussed how this may be achieved. How an individual is able to engage with their day-to-day activities while managing their rehabilitation programme at the same time. Including patient perspectives in the development of health care interventions could be used as a way to empower individuals and health care workers to work together. Dahlberg *et al* (2009) advocated the use of an individual's lifeworld as a way of including patients' perspectives when developing rehabilitation interventions (Figure 3.2).

Figure 3.2: Summary of the boundaries and parameters of lifeworld-led care. (Todres *et al*, 2007, p.61)



Such an approach could provide an opportunity to broaden the understanding of an individual's journey back into work while managing the effects of a traumatic hand injury by seeing past a purely medical perspective. Johansson *et al* (2009) used the approach to gain insights into experiences of people living with diabetes; Nordgren *et al* (2008) examined middle-aged men's experiences of living with heart failure and Bremner *et al* (2009) examined individuals' experiences following cardiac arrest. Such a caring science approach provided an opportunity for patients' voices to be heard and to gain deeper insights into patients' experiences which were then included in the development of rehabilitation interventions.

Gadamer (1996) puts forward the idea that the medical profession as a whole should consider including the lifeworld of their patients in the development of their rehabilitation interventions. Observing objective signs with individuals who have experienced a traumatic hand injury, for example range of movement, can make important contributions to the hand surgery and hand therapy fields but are of limited value without taking into account the meaning that life situations hold for them.

Todres *et al* (2007) and Dahlberg *et al* (2009) discuss the need to focus more upon the patient when devising health care interventions by arguing for the need to include an existential view of healthcare in the form of 'lifeworld-led' health care which is different to patient-led care which can have economic and political underpinnings instead of solely focussing upon patient concerns. Todres *et al* (2007) argue that there is a need for an existential view of well-being to be considered when developing health care interventions. They state that phenomenological philosophers such as Heiddeger and Merleau-Ponty highlight the fact that "*individuals have existential freedoms to make choices within certain limits"* (Dahlberg *et al*, 2009, p. 267). Choices can be limited in the sense that all choices are made in the context of what is happening in the world around us. We are not free to make decisions and choices in isolation from the world around us. Following a traumatic hand injury, the individual's ability to engage in the world will change - and choices made will alter. In fact Dahlberg *et al*, (2008) view illness "*as a closing down of our potential to exercise one's engagement with the world and the future in all the ways that may beckon*" (Dahlberg *et al*, 2009, p. 267). The tension between how we manage our differing choices in the context of the new reality of managing a traumatic hand injury, can provide an existential perspective in that better insights can be gained of the phenomena under investigation through a greater understanding of an individual's lifeworld. Dahlberg *et al*, (2009) argue that such

understandings not only would allow deeper insights but that these insights could be used to develop rehabilitation interventions reflecting that well-being and illness are intimately bound up in the human. Such insights have the potential to make rehabilitation interventions more relevant to patients. Hemingway (2011) adds that concentrating upon the lifeworld of individuals can make the well-being of individuals a central concern in the provision of health care.

An understanding of individuals' lived experiences, by examining their lifeworld, can be enhanced further by exploring the five constituent parts of the lifeworld: temporality, spatiality, intersubjectivity, embodiment and mood (Todres *et al*, 2007). Examining the lifeworld through these constituent parts can be used as a way of supporting and enhancing interpretations. It was useful in this study to use these as a means of providing insights into the experiences of participants in this study. Dahlberg *et al* (2009) add that such existential dimensions or constituents of the lifeworld are intertwined but considering them individually offers an opportunity to emphasise different nuances of the lifeworld (Dahlberg *et al*, 2009). This was considered necessary as the researcher has worked with this patient group for many years and had formed perceptions and opinions about what such a phenomenon might mean. The five parts are briefly described in the following paragraphs.

Temporality: The idea of time in this context is not solely focussed upon the linear passing of time. In the context of this study the way an individual's experience of their hand injury alters over time is viewed as central to the research question. For instance the idea of the healing structure (tendon for example) taking up to twelve weeks to heal safely may appear a manageable amount of time to an individual when first injured. However the reality of living with an injury on a day-to-day level may make it appear that time has slowed down due to their inability to engage in their usual daily activities.

Spatiality: Spatiality refers to the environment we inhabit and the impact it can have on our ability to relate to it. It would be of interest to examine how an individual's perception may change following a traumatic hand injury. To explore how the injury may impact upon the space that an individual usually occupies and the roles that they usually participate in and how the injury may impact upon this.

Intersubjectivity refers to how other people are always taken into account in some way in the sense that we relate to others and the world in a meaningful way. This

may prove to be a useful means of gaining insights into how a hand injury may impact upon the relationships of the injured individual and the ability to relate to others and how they may relate to the individual.

Embodiment: As humans we experience the world through our bodies and it is through our bodies that we can relate to the world and others within it. The impact on an individual following an injury cannot be fully understood without taking into consideration social dimension that such an injury may have on the individual. In this study such an effect in the context of individuals' experiences is considered to be of significant interest.

Mood: Literature has highlighted the fact that sustaining a traumatic hand injury can have an impact on the mood of an individual and as such can alter the perspective. The mood of an individual can influence, and be influenced by, physical and psychological wellbeing.

Galvin and Todres (2013) argue that using these constituent parts of the lifeworld can act as a standard to be used when attempting to understand health and illness. The five constituent parts of the lifeworld as described by Todres *et al* (2007) interact and the relationship between them may change over time. The need to examine such changes over time for the patient group in this study suggests the need to consider a longitudinal perspective.

In this study a hermeneutic approach has been used that puts emphasis on the role of the researcher in the interpretation of the findings. Lifeworld based research is focused on the world as it is experienced prior to the formulation of any hypothesis in order to explain it (Dahlberg *et al*, 2008).

The theoretical underpinnings of the lifeworld will now be outlined to clarify its relevance to this study. The idea of the lifeworld, as understood in phenomenological philosophy, was first outlined at the beginning of the twentieth century by Husserl (Todres and Wheeler, 2001). Dahlberg *et al* (2008) developed the work of Husserl and in their writing explain that his intention was for lifeworld theory to "*become the new basis for all philosophy and human science research*" (Dahlberg *et al*, 2008, p.35). Dahlberg *et al* (2008) add that Husserl was critical of positivistic methods of scientific enquiry which comprised the dominant form of philosophy and scientific research at that time. Laverty (2003) described how

Husserl argued that *"living subjects are not simply reacting automatically to external stimuli, but rather are responding to their own perception of what these stimuli mean*" (Laverty, 2003, p. 3). Laverty (2003) added that Husserl argued that scientific research should focus upon describing the world in the way it is experienced by humans. Individuals' subjective experience could be viewed as a way of understanding motivations, as their actions are influenced by what they perceive to be real (Lopez and Willis, 2004). Valle *et al* (1989) point out that Husserl's answer to this problem was to include the everyday human world as the foundation for all science by going "*back to the things themselves*" (Valle *et al*, 1989, p.9). This concept provided a framework and context for the understanding of meanings that individuals apply to their experiences. Husserl argued that all our meaning-based constructs of the world lay in the fundamental inter-relationship between consciousness and reality.

Husserl's view was that to understand human experience one needs to gain insights into what he termed the 'natural attitude' where an individual engages in the world when not actively analysing their behaviour or consciously thinking about participating in the activity. They are 'just doing' the activity. Husserl viewed this as a naive approach to the world, a mostly uncritical position from which the world could be best understood. Examining the pre-reflective unanalysed descriptions of an individual's natural attitude could be used as building blocks of experience that can then be used to provide a method to identify and describe the essence of the activity under investigation. To achieve this, and in order to understand a given phenomenon, the researcher attempts to suspend or 'bracket' their biases and preconceptions (Valle *et al*, 1989). To attempt to bracket one's biases, one needs to lay out or make these assumptions explicit. The process of bracketing is a dynamic one and, as assumptions or preconceptions become clear in relation to the matter under study, new understandings can emerge and be bracketed and then the process repeated throughout the analysis.

In contrast to Husserl's phenomenological perspective, Martin Heidegger and others asserted that the essence of human understanding is hermeneutic; that our understanding of the everyday world is derived from our interpretation of it (Dahlberg *et al*, 2008). Lopez and Willis (2004) explained how Heidegger felt that the focus of phenomenological enquiry should be "*the relationship between the individual and his lifeworld and that it should go beyond description of core concepts and essences to look for meanings embedded in common life practices*" (Lopez and Willis, 2004, p.

728). Instead the focus of interpretative inquiry is on what humans experience rather than what they consciously know - meanings cannot always be clear to the participants but can be gained from the narratives produced by them. Heidegger used the term 'being in the world' rather than ‘lifeworld’ to express the idea that individuals’ realities are influenced by the world in which they live and cannot be isolated from that world and that the interpretation of an experience is an integral part of that experience. He also outlined that our understanding of the world is derived from our interpretation of it. As a result, his focus of examination was on the relation of the individual to his lifeworld.

What Heidegger meant by this was that a person is always conscious *of* something, whether a concrete object or an abstract idea (Valle *et al,* 1989). Each individual and his or her world are said to co-constitute one another and are interdependent. Heidegger expressed this relationship in the term Dasein, or ‘being-in-the-world’. Valle *et al* (1989) state that this interdependency is based on the idea that people and the world are always in dialogue with one another. The individual is influenced by situations that present themselves and as a result is “*condemned to choice*” (Valle *et al*, 1989, p.8). For example, in this study the participants would have been unaware that they would suffer a traumatic hand injury. Such an injury required them to make choices that may be influenced by the environment, family life and working life - not just the injury. This means that they will not have complete personal freedom to make choices as they have to take into account such external influences.

Two concepts that are significant to reflective lifeworld research are openness and bridling. These concepts are explained and links between them discussed. The relevance of these issues to the research is identified. Dahlberg and Dahlberg (2004) view the aim of lifeworld research to attempt to interpret another person’s experience by investigating “*the bond between the visible and invisible, to explore the invisible by using the visible as a point of departure*” (Dahlberg and Dahlberg, 2004, p.270). This can be understood using an example of a person smiling. The observer can see that the individual is smiling (the visible) but it is not clear what the meaning of the smile might be (the invisible). The smile may be a sign of inclusivity, nervousness or happiness for example. Palmer *et al*, (2010) in their study that examined women's lived experiences of initiating breastfeeding within the context of early home discharge in Sweden. Palmer *et al* (2010) highlighted that the mothers experience of breastfeeding viewed themselves “to be the food” (visible) and the milk as something unknown (invisible). It was reported that the unknown feeling

created a sense of insecurity about the mother's ability to interpret the child's signals (invisible).

It is possible to gain understandings of the world around us not only by questioning experiences and interactions intellectually but through our bodies as well. Merleau-Ponty (1995) explains that such embodiment can prompt insights to the world around us through the context we find ourselves in which include how we relate to people and the world. Descartes separated understanding of the world in two by considering the mind and body as separate entities. Merleau-Ponty (1995) argued that one cannot separate the mind and body as it is through both our mind and bodies that context meaning can be gained. Dahlberg *et al* (2008) add that "*our experience is that of a world that is partly hidden and partly uncovered whether it is of things or people*" (Dahlberg *et al*, 2008, p. 91). Husserl argues that it is through our own lifeworld it is possible to reach another's and gain insights and understandings of the 'invisible' (Husserl, 1977). Meaning is being born from the situation rather than being brought to the situation by either the subject or the object. Dahlberg *et al* (2008) argue that to be open to the phenomenon under investigation there is a need to "*reach beyond the natural attitude of taken for granted meanings and understanding*" (Dahlberg *et al*, 2008, p.73). In this study it was considered of interest to examine in detail the experiences of individuals with hand injuries. It is clear that the researcher has experience of working with this patient group so the need to use and restrain or 'bridle' these experiences when attempting to gain insights into such meanings was deemed essential.

The term 'bridling' differs from 'bracketing'. Bracketing one's pre-understandings aims to identify and remove any pre-understandings of the researcher from the process of analysis in an attempt to see the essence of the phenomenon. Dahlberg *et al* (2008) describe how 'bridling' can act as a positive method of increasing understandings by including the researchers pre-understandings in the research process. It is felt that it is impossible to fully remove or even be aware of one's pre understandings of the phenomenon under investigation but instead the investigator should become aware of them and try and restrain or rein them in for as long as possible to ensure that one does not make definite what is indefinite for as long as possible. The process of bridling aims to help the researcher stop pre-understandings from having an uncontrolled effect on the evolving understanding of the phenomenon in question. Without such a restraining effect the ability to maintain a sense of openness to the phenomenon is limited. Dahlberg *et al* (2008) posit that

"'bracketing' is directed backwards, putting all energy into fighting pre-understanding and keeping it in check "back there", not letting it affect what is happening "here and now", "bridling" has a more positive tone to it as it aims to direct the energy into the open and respectful attitude that allows the phenomena to present itself" (Dahlberg, *et al*, 2008, p. 130). Such restraint is needed to see the phenomenon in a new way and Johansson *et al* (2009) state that "*pre-understanding is a necessary condition for understanding, but if it works 'uncontrolled' it makes us see what we expect to see and have always seen*" (Johansson *et al*, 2009 p. 201). The need to bridle initial interpretations was essential. How this was done is explained in detail in section 4.8 (methods of analysis).

3.3 Longitudinal perspective

The need to reflect details of individuals' lived experiences by focussing upon the lifeworld as it was experienced, directed the development of the methods for this study. It was considered essential to incorporate a longitudinal perspective into the methodology of this study to provide an opportunity to examine the adaptive process of participants from the point of injury, past the point of discharge and back into work. Such a perspective provided an opportunity to gain insights throughout the return to work and healing phase following such an injury. It could also provide an opportunity to uncover the changing emphasis on temporality, spatiality, intersubjectivity, embodiment and mood. If the study was retrospective in design potential insights into how participants adapted to their new circumstances may be missed. Such insights are important to help develop an understanding of individuals' experiences over time. Retrospective studies may have resulted in participant's descriptions being made up of transformed interpretations of experiences rather than being based in the lifeworld as it is experienced (Dahlberg *et al*, 2008). Retrospective studies can only access transformed and multiply reinterpreted accounts of experience (Edwards *et al*, 2004). Contemporaneous accounts of experiences are necessary to access the lifeworld.

Neale and Flowerdew (2003) comment upon the deliberate way in which time is incorporated into the research process making change a central focus of analytical attention. They emphasised the need to recognise that it is "*through time that we can begin to grasp the nature of social change, the mechanisms and strategies used by individuals to generate and manage change in their personal lives and the way*

structural change impacts on the lives of individuals" (Neale and Flowerdew, 2003, p.190). The concern is not simply with the concrete events that can be measured in precise ways but with the individual, and how they develop courses of action that deal with the day-to-day events that shape their lives. This allows an opportunity to explore individuals' perceptions through an unpredictably changing environment. Using a person's return to work (or not) as a measure of rehabilitative success may not allow for a more complete insight into an individual's experience.

3.4 Summary

A qualitative research methodology has been chosen as a theoretical perspective to help answer the research question in this study. The literature review illustrated the fact that individuals who have sustained traumatic hand injuries have to manage a hand rehabilitation programme while attempting to adapt to the new realities of their injured hand on their return to work journey. A reflective lifeworld research methodology with a longitudinal perspective was used to underpin this study to explore individuals' experiences of returning to work while managing a traumatic hand injury. Use of a reflective lifeworld research approach was chosen as it affords an opportunity to prioritise participants' lived perspectives which Dahlberg *et al* (2008) argue should be central to the ethics of caring. Such insights used to develop health care interventions could be used as a way to empower individuals and health care workers to work together. Dahlberg *et al* (2009) advocated the use of an individual's lifeworld as a way of including patients' perspectives when developing rehabilitation interventions. A longitudinal perspective was included to provide an opportunity to gain insights into the transformation and adaption process through the return to work and healing phase following such an injury. The longitudinal aspect of the study is critical in order to identify the timing and type of intervention would support successful return to work. Thus the epistemological stance of interpretivism will be adopted within a longitudinal phenomenological lifeworld study. The methods used to carry this out are explained and justified in chapter four.

Chapter 4: Methods: stage one

4.1 Introduction

This chapter sets out how the methods for the first stage of this study were selected and conducted taking account of the methodological stance and in line with the research aims. A reflective lifeworld approach with a longitudinal perspective has been used to gain insights into how people experience the phenomenon of returning to work following a traumatic hand injury. In addition, reflections on how the study progressed in reality are interwoven throughout the chapter as a means of explaining decisions that were made about the methods used. Methods used for the second part of the study can be found in section 7.2.

4.2 Study site

A source, in large enough numbers, of participants who had sustained a traumatic hand injury was required and preferably from one organisation to make the study logistically easier. The need to follow up patients meant that there needed to be a large pool of 'local' patients. The site chosen to recruit participants was a large inner city teaching hospital with a specialist A & E Department. The hospital serves a catchment area that has in excess of 500,000 people. As a result, a broad and varied range of traumatic hand conditions is seen. Once referred to the hospital, people may be reviewed by specialist Plastic and Reconstructive Surgeons, Orthopaedic Surgeons or Rheumatologists. Specialist post-operative hand trauma rehabilitation is provided by the occupational therapy department on an outpatient basis.

This site was considered ideal to be used as a base for this study. The researcher has worked full-time in this Department for fifteen years and is familiar with the policies and procedures used. Being an insider researcher was a positive feature as there was an established relationship with the team and department manager as well as insight with regard to how the department functioned. The shared relationships with the departmental team provided an opportunity to discuss any concerns that arose about the study. Following a discussion with the departmental manager and completion of research ethics and governance processes access to

the department was permitted for the duration of the study. A potential difficulty with being an insider researcher was the risk of bias and assumption on the part of researcher who continued to work part-time as an occupational therapist in the Department during this stage of the study. A further risk for an insider researcher is that of role confusion between the clinical role and the researcher role. To minimise this risk for patients, staff and the researcher the potential participants were newly referred to the department and were unaware that the researcher usually worked in the department; they were not patients being cared for by the researcher.

4.3 Participant recruitment and selection process

Before the research began the researcher met with members of the occupational therapy department to explain the nature of the research, its aims and how it was planned to proceed. An information sheet was given to the therapists that summarised the features of the research and the planned inclusion criteria (Appendix 2). A convenience sampling strategy was considered to be appropriate due to the nature of the research question. Decisions were made by the researcher to include participants who were both in work and had sustained a traumatic hand injury. Participants were approached as they were referred to the hand therapy department.The participants who were eventually recruited to the study did reflect the gender ratio, type of injury and age range described in Appendix one.

The occupational therapists working in the hand therapy department were asked to initially approach potential participants as a means of reducing the possibility that potential participants might have felt coerced into taking part in the study. Patients are usually referred to the occupational therapy department within the first three days following their injury or surgery and the first outpatient appointment is usually offered within one week following surgery. Potential participants were identified shortly after their referral to the hand therapy department. Potential participants were approached in order of referral received in the hand therapy department. An occupational therapist from the department made initial contact with the potential participant to give a brief summary of the planned research and to enquire if they would be happy to meet with the researcher to get more information. If the potential participant was interested in taking part, the researcher held an introductory meeting with him/her in the department, to discuss the general aims of the study in more detail and a copy of the study information sheet was given to the potential

participant at that time (Appendix 3). The researcher telephoned the potential participant three to five days later to see if he/she was still willing to participate in the research. If he/she answered in the affirmative a time and place was arranged to hold the first interview. The time lag between the introductory meeting and the telephone call was devised to allow the potential participant time to read the information sheet and consider in more depth if they were interested in participating in the study or not. If they were in agreement, a consent form was signed at the time and place of the first interview. For those who had injured their dominant hand a close approximation of their usual signature was written with their non-dominant hand (Appendix 4).

Participants included in this study sustained a traumatic hand injury but, the type and impact of such injuries were wide ranging. Types of injuries referred to the occupational therapy department can range from a slight sprain to a total upper limb amputation. In addition, individuals who presented with conditions that are known to resolve in less than a month were excluded as it was considered that individuals with such injuries would not have enough contact with surgical and rehabilitative services. There is a very small percentage of patient referrals to the hand therapy department which may need multiple surgical interventions, such patients were also excluded as time constraints of the study needed to be taken into consideration. As a result, for this study, the types of traumatic hand conditions that potential participants may have sustained were chosen with regards to the time rehabilitation would take. Post-operative guidelines have been developed for most hand injuries and they take into account the healing time of the damaged structure (Peck *et al*, 2014) (Appendix 5). As a result such protocols of care were used as a method of assessing the severity of the injury. It was decided that individuals who had sustained an injury that required that they participate in an eight to twelve week rehabilitation programme would be included. It was anticipated that such injuries would include tendon(s) and/or nerve(s) damage and/or fractures of the hand and forearm. This also provided an opportunity to move away from a study that may be construed as being condition specific, the return to work experiences of individuals who had damaged flexor tendons for example. Instead, such an inclusion criteria allowed the study to be broad in its focus by concentrating on the experiences of individuals following a traumatic hand injury in general.

Participants were adults from the age of 18 years and above who would be receiving outpatient therapy for at least eight weeks. As the study was examining return-to-

work experiences, participants needed to have been in full time work for at least six months prior to their injury and to be expecting to return to work.
Thus the inclusion criteria were:

- Age eighteen or over
- In full time work for at least six months immediately prior to the injury
- An injury requiring an 8-12 week rehabilitation programme in the hand therapy department.

Potential participants who were self-employed were not included as the assumption was made that they would potentially constitute a separate sample group because their working constraints would be different. It was anticipated that as they are accountable chiefly to themselves they do not have the same pressure to satisfy the demands of either a manager or their co-workers. As self-employed people, they may have a pressure to return to work earlier than desirable if they do not have good sickness insurance policies or if they have contracts left to fulfil. Thus specific exclusion criteria were:

- Self-employed
- Not in full-time work during the last six months
- Patient was being treated by the researcher

Recruitment was slower than expected. It became apparent that although suitable potential participants were being referred to the hand therapy department the occupational therapists were not remembering to mention the study to potential participants. The researcher attended the hand therapy department throughout the recruitment phase, as being present acted as a reminder to the occupational therapists to discuss the study with potential participants. The researcher was aware of the risk of researcher bias, defined by as Onwuegbuzie and Leech, (2007) as a phenomenon that can occur when "*the researcher has personal biases or a priori assumptions that he/she is unable to bracket*" (Onwuegbuzie and Leech, 2007, p. 236). To minimise this possibility of influencing the occupational therapists' decision-making processes the researcher stayed out of the treatment room and remained an the office away from the patient area. As an observer, it became clear to the researcher that the occupational therapists were in fact attempting to recruit potential participants but were placing emphasis on the fact that there was no pressure for them to participate in the study, almost to the extent that they were being talked out of even considering participating.

4.3.1 Sample size

Dahlberg *et al*, (2008) describe that, when selecting a sample, the question of variation is more important than the question of number as a variation in participants can provide an opportunity for more general insights. As participants who had sustained a traumatic hand injury were the focus of this study, a convenience sample strategy was used. As the study is taking a qualitative approach generalisability is not sought by using a large sample size, instead the aim is to explore meanings that participants attribute to their experiences (Ritchie *et al,* 2014). Consequently, a sample size of seven participants was selected. Dahlberg *et al* (2008) suggested a sample size of five but, as the study has a longitudinal component, seven participants were included in this study to allow for the possibility that some participants may drop out of the study before completing the entire interview process.

4.4 Data collection method - interviews

In reflective lifeworld research, data gathering is governed by three factors:

1) the nature of the phenomenon,
2) the research question and
3) the aim to examine the lifeworld of an individual's experience of the phenomenon under study and the research process.

As the phenomenon under investigation, returning to work while managing a traumatic hand injury, is complex and ambiguous, an interview-based method of data gathering was deemed appropriate. Qualitative interviews were used as a method of gaining nuanced descriptions of the lifeworld of the participant group prior to attempting to gain insights into the meanings that they attribute to their experiences (Kvale, 1996). Wertz (2005) described the use of interviews as being useful when: " *the phenomenon of interest is complex in structure, extensive in scope and/or subtle in features that participants are not likely to offer spontaneously in response to questions or instructions at the outset*" (Wertz, 2005, p.5). In this study such complexity was anticipated and taking a hermeneutic Reflective

Lifeworld Research approach, the use of interviews provided an opportunity to gain insights into the phenomena under investigation.

Semi-structured interviews were used to allow for a rich opportunity for new insights and new ways of "*listening to the voice of the lifeworld and at the same time to strengthen it"* (Dahlberg *et al*, 2008, p.184). Semi-structured interview questions were introductory in nature or were designed to enquire about areas of interest that focused upon the phenomenon under investigation. Further questions used were prompts or closing questions and these were to be used as an aid to memory and would not necessarily be used in the interviews themselves (Appendix 6). As the aim of the interviews was to ensure that both the researcher and the participant were open to the meanings of the phenomenon under investigation, the researcher was aware of the need to be spontaneous and flexible within the interview setting depending upon how it progressed (Seale, 2011). In addition the need to 'bridle' or restrain pre-understandings of the researcher when carrying out the interviews was imperative. Hallberg (2008) made it clear that if an interview topic guide is too rigidly adhered to then the answers gained may reflect the interviewer's pre-understandings of the phenomenon under investigation rather than new insights into them.

The researcher made a continual effort to ensure that participants were asked questions in a way that would provide an opportunity to gain insights into the phenomenon under investigation. The focus was on looking beyond how the participant felt about their experience by attempting to gain insights solely into the phenomenon under investigation (Dahlberg *et al*, 2008). The need for the researcher to listen actively is described by Kvale as being more important than "*mastering questioning techniques*" (Kvale, 1996, p.132). Listening closely and responding to the context and content of the interview as it proceeds provided an opportunity for the researcher to remain open to the phenomenon under investigation. For example, there was an awareness of the need to not solely focus upon medical concerns and view the fact that if a participant had returned to work the rehabilitation outcome could not be viewed as a positive one. The researcher had to maintain such an awareness throughout the interview process and restrain whenever possible such attitudes.

Asking participants to keep a diary to record their experiences has also been used by Milligan *et al* (2005) and when considering such a data collection method

Dahlberg *et al* (2008) emphasised the need to ensure that participants focus on their lived experiences by providing descriptions in the first person. It was considered that hand therapy patients in general can find it difficult to carry out their usual daily activities as well as their exercise programmes so it was believed that it may be difficult for them to maintain a diary, either written or recorded as it is possible that they had injured their dominant hand so writing a diary would be difficult for example. It may have been possible to maintain a spoken, recorded diary but it was considered that this would take a lot of motivation to complete over a number of months so this idea was discarded.

4.4.1 Interview time scale

The interview time scale was planned to capture experiences of each participant at three different points in their potential recovery back into work. The prospective, longitudinal nature of the interview time scale was devised to capture participants' adaptive processes as they attempted to return to work while managing a traumatic hand injury. It was assumed that participants would be confronted with choices concerning the management of the injury and maintaining their usual life roles and that the participant would have to consider this at the time the original injury occurred. It was also of interest to examine how the experience of having a traumatic hand injury would affect choices they would make concerning their engagement with functional activities. As a result the first interview was planned to take place as close to the point of injury as possible, most likely at the second occupational therapy outpatient appointment. This was usually within a week of sustaining the injury. The second interview was planned to take place at the point just before the participants anticipated returning to work. It was chosen as an interview point to examine the choices individuals would make at this point and what might influence such choices. It was anticipated by the researcher that participants would be contemplating a return to work at about six to eight weeks following their injury. This assumption was made as it coincided with the time that repaired structures would begin to strengthen and functional activity would be sanctioned by hand therapists. This interview time scale was devised to examine the experiences of participants throughout their rehabilitation process from the point of injury through to the potential return to work.

It was anticipated that the third interview would take place about four to six weeks after they had returned to work. The researcher was aware that it was a possibility that some of the participants may have opted not to return to work at all and it was considered of interest to examine this aspect.

Table 4.1 highlights the dates and times that the interviews actually took place for each of the seven participants. The reality of the interview process differed from the anticipated plan in relation to the timing of the second and third interview. All participants were recruited and interviewed at about one week after their injury and surgery. One of the participants had returned to work within three days of her injury, three others returned to work very shortly after the first interview. Of the other three, one did not return at all, another returned to his country of origin to recuperate for one month and the third waited to return to work until he had made a near full recovery.

Table 4.1: Dates of interviews and the time between interviews

Participant	Interview 1 2nd OT appoint.	Interview 2 Anticipated RTW	Interview 3 Back at work	Total time from first to third interview	Return to work from operation date
1	04/2/2010	16/4/2010	28/6/2010	20.5 weeks	Did not return
2	08/2/2010	18/3/2010	21/6/2010	19 weeks	35 days
3	11/2/2010	11/3/2010	23/6/2010	19 weeks	10 days
4	24/2/2010	07/3/2010	09/6/2010	15 weeks	10 days
5	02/3/2010	22/4/2010	09/6/2010	14.5 weeks	4 days
6	12/3/2010	28/4/2010	23/6/2010	15 weeks	14 days
7	25/3/2010	10/5/2010	14/7/2010	15.5 weeks	80 days

Once it became clear that some of the participants had, or planned to, return to work much sooner than was anticipated the timing of the second interview had to change. The timing of the second interview was brought forward to try and capture the moment that was as close to the return to work point as possible. This was done to

attempt to get a sense of the meanings and experiences participants experienced at this time. An assumption was made that participants would return to work at about eight weeks following their surgery as this is the point when the risk of rupturing/damaging the repairing structure reduces. This was done in order to gain a sense of why a return to work was deemed necessary at that time. In addition once some participants returned to work it proved more difficult to arrange the second interview. Their working hours and practices made it difficult for some of them to arrange a time to meet for the interview – or in fact for their hand therapy appointment. The researcher had to remain flexible and patient and maintain contact with participants and negotiate times for interviews that were deemed suitable for them. The fact that some participants returned to work within a week or two after their injury meant that the anticipated time for the second and third interviews had to be brought forward to gain a sense of this transition phase.

Each interview was audio recorded and was transcribed verbatim by the researcher. In recognition of the time and effort in participating in the study a token of thanks in the form of a £25 voucher was given to each participant at the end of the interview process. It was explained to the participants that the voucher was in recognition of the time given and was not conditional on any particular responses given (Wertheimer and Miller, 2008).

4.4.2 Selection of venues for interviews

Participants were invited to choose where the planned interview would take place in order to make the interview process as convenient as possible. The researcher advised the participants that the interview venue would need to be a quiet space.

For the first round of interviews five participants opted to be interviewed in a quiet room adjacent to the occupational therapy department where they were receiving treatment for their injuries. Of the remaining two, one opted to be interviewed in a private, quiet room at her place of work and the other in a quiet place at his wife's place of work.

In the second round of interviews, six interviews took place in the quiet room adjacent to the occupational therapy department and one opted to be interviewed in a private, quiet room at her place of work. For the final round of interviews four

participants opted to be interviewed in a room adjacent to the occupational therapy department whilst the remaining three opted to be interviewed in quiet rooms at their place of work.

4.5 Ethical issues

Ethical approval for the study was obtained from both the NHS and from the University. R and D approval was from the NHS Trust in which the study took place. Ethics approval for the first stage of the study was granted by East London and the City Research Ethics Committee on 20th November 2009, [reference number 09/H0703/99] (Appendix 7). London South Bank University Ethics approval was granted [reference number UREC 1017] (Appendix 7). Final R&D approval for first stage of the study was granted by the NHS Trust on 5/1/2010, [reference number 006943] (Appendix 7).

Potential participants were given an information sheet describing the study when first approached about the study (Appendix 3). Potential participants were given three to five days after their introductory meeting with the researcher to give them time to consider if they wanted to participate in the study and to ask questions about the study if they wished. Written consent was obtained from each participant at the beginning of the first interview. Verbal consent was discussed and sought at the beginning of the subsequent two interviews. At this and each subsequent interview it was made clear that any details given by participants would remain confidential.

As the subject matter of the interviews was the individuals' experiences following a traumatic injury, the researcher was concerned that potentially participants might find the activity of describing their experiences distressing. Holloway and Wheeler (2010) highlighted the fact that individuals may find interviews difficult for this reason. As a consequence, access to a Clinical Psychology service was arranged for participants in this study if this was required over the course of the series of interviews (Appendix 8).

Consideration was also given to the fact that, within the interviews, participants may make comments about the clinical care they are receiving. As my role was that of researcher not as therapist, advice and support were offered about where they could go for a second opinion, for example, but I did not discuss any potential medical

concerns. Similarly, if issues concerning their work were discussed within the interviews, advice would be given about making contact with the Citizens Advice Service, for example.

In accordance with the UK Research Integrity Office (2009) the need to ensure that personal details of participants should remain confidential was adhered to in this study. It was made clear to participants that any information gained and then used by the researcher would be kept confidential. Each interview was audio recorded. Participants were made aware that the interviews would be audio recorded at the introductory meeting with the researcher. The audio recordings were transcribed verbatim by the researcher and transcriptions are kept in the researcher's office in a secure cabinet at an office at London South Bank University. The completed consent forms are kept in a secure cabinet in the researchers' home. In addition, a password protected USB external hard drive was used to store data. This is in keeping with the ethical requirements of this study. Data will be kept for ten years in total. All participants' names were changed to maintain confidentiality within the transcriptions and the main body of the thesis. Pseudonyms will be used in this thesis and in any reports or publications that come from the study. If quotes are used in reports or publications any identifiers will be removed.

4.6 Methods of analysis

Dahlberg *et al* (2008) emphasise that all reflective lifeworld research is governed by some general principles. The analysis of data is divided into or made up of, three parts. It is described as a movement between the whole – the parts - the whole which Dahlberg *et al* (2008) describe as being central to all understanding, within a natural attitude as well as a scientific attitude.

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4.6.1 The whole

All audio-recorded interviews were transcribed verbatim by the researcher as soon as was possible after the interview had taken place (Appendix 9). Bailey (2008) viewed this process as being an interpretive one and therefore represented the first step in analysing the data. Finlay (2011) describes this as a practical way to dwell with the data and to empathise with the participant by "*repeatedly listening to the description of their world and trying to get a feel for their situation*" (Finlay, 2011, p.

229). Once the transcription was completed the researcher wrote down initial thoughts and impressions and the transcription was read a number of times to get a sense of the interview as a whole. The initial readings were seen as complete when the researcher had a good sense of the whole text of each interview and could easily and briefly articulate the overall theme of each text (Appendix 9). The audio recordings were played wherever possible while the readings were taking place to gain sense of the pace, mood and tone of the transcribed readings. These readings were not only done to increase familiarity with the texts but were also used as a way of enabling the researcher to become prepared to be open to new understandings. Non-verbal information was not always included in the transcription process but these were paid attention to whilst repeatedly playing back the audio-recordings. The intonation, pauses, laughter, sighs for example in the recordings gave a sense of the tone and style of the interview and was useful in helping the researcher to seek understandings.

4.6.2 The parts

Once the data became familiar insights and understandings began to emerge. Each of the twenty one interviews were analysed separately. This deeper part of analysis took place once all the interviews were completed. To facilitate deeper understandings from the interviews, the transcribed texts were divided into smaller sections –or meaning units (Appendix 10). Braun and Clark (2006) described meaning units, or codes as a means of "*identifying a feature of the data that appears interesting to the analyst, and refer to the most basic segment or element of the raw data*" (Braun and Clark, 2006, p.88). The researcher used this point of the analysis to organise data into meaningful groups (Appendix 11). In this study, meaning units were looked for in each interview and in an attempt to maintain the context of the meaning unit, it was usually recorded within the sentence it was noted in. This was done to try and maintain a sense of context for each meaning unit that was noted. Initially transcribed data were arranged in such a way that the right hand side of the page was left blank, this space being used for noting emerging meanings and ideas while trying to understand and identify meanings in the transcriptions (Appendix 11).

Once meaning units were identified the transcriptions were re-read by concentrating on the meanings and emergence of new ideas within the transcribed texts
Meaning units were then clustered together to help identify essential meanings of

the phenomena under investigation (Appendix 12). This was done by examining the meaning units from each transcribed interview and searching for ways that they could be combined or clustered to form a theme. In order to do this Finlay (2011) described the need to focus on the way the situation under investigation appears to the participant. Dahlberg *et al* (2008) stated that examining data through the constituent parts of the lifeworld offers an opportunity to emphasise different nuances of the lifeworld. Finlay (2011) reported that it can be useful to interrogate the analysis using lifeworld-orientated questions and the researcher utilised this idea in the analysis of this study. It was deemed useful as a means of reducing the possibility of the researcher focusing upon taken-for-granted views about the data. Questions used were adapted from Finlay (Finlay, 2011, p. 230).

- What is his/her sense of embodiment? (embodiment)
- Where does he/she experience his/her day? Does he/she feel closed in? (spatiality)
- How does s/he pass his/her day? Is it pressured? Isolated? Rushed? Boring? (temporality)
- How does s/he experience relating to others? Who are the significant people involved and how are their relationships impacted? (intersubjectivity)
- Is there a mood/tone attached to the phenomenon? What background is being expressed such as 'feeling distant', 'worry' (mood)

It was important that the researcher was continually aware of his perceptions and opinions and ensure that the meanings were located in the transcribed texts and not confirming previously held opinions. The use of such questions helped to maintain a focus on the interview and the participants.

It was important that the researcher practised openness, as at this point it was important to be open to the possibility of seeing meanings that were present. An open approach enabled the researcher to become prepared for new understandings of the phenomena under investigation as opposed to looking for and finding meanings that confirm presupposed attitudes or views. This was what Dahlberg *et al* (2008) described as attempting to understand the whole, the initial readings in terms of its parts – the meaning clusters –against the backdrop of the whole which they argue takes us into the realm of understanding the phenomena in new ways. This open approach was continually worked at by trying to remain familiar with the

transcriptions and audio recordings and by attempting to ensure the emerging meanings were situated in the data.

4.6.3 The whole – longitudinal perspective

Following how participants' experiences changed over the course of their return to work was deemed essential as a method of examining possible adaptation over time. Lewis (2007) highlighted four different aspects of change to explore in qualitative longitudinal data. Firstly, narrative change, or the unfolding of individual stories across time was described (see Appendix 13). This can involve specific events and interactions, more subjective feelings, hopes, reactions and plans. Lewis (2007) used the term 'narrative' rather than 'chronological' change "*because stories are not always told in a linear way*" (Lewis, 2007 p. 458). People may forget things, mention stories or experiences at different interviews or only feel happy to discuss things when they feel comfortable with the interviewer. The second type of change described arose from the reinterpretation by the participant – their rethinking or retelling of experiences and feelings described earlier. This is a process that may be explicit or implicit. The researcher's reinterpretation is the third type mentioned. As more interviews are carried out it is possible to gain a better or different understanding of a participant's opinions and views and possibly to re-interpret them in the context of other peoples' interviews. Fourth, the absence of change is also important to highlight; what might remain unchanged or constant. Participants may have expected or wanted there to be a change, perhaps in their function which did not transpire.

Lewis' method of approaching the data provides an opportunity to look for different types of change in qualitative longitudinal data. What type of change is occurring and how this change can help inform possible meanings in the data and take us beyond literal readings of the data alone. Does change feature in their narrative, or their interpretation? These four components proved to be a useful lens through which to consider the phenomenon under investigation over the course of the interview process in this study. The researcher explored the qualitative longitudinal data using Lewis's four aspects.

In this study, once the three interviews were completed the longitudinal aspect of the journey was analysed using Lewis' (Lewis, 2007) methods. The longitudinal aspect

of the analysis took place once all twenty one interviews were completed. This was done to enable the researcher to gain deeper understandings of each part (interview) of the phenomenon under investigation. Once the analysis of each interview was completed it was possible to examine each part in relation to the whole by examining them between and across the different interviews. First of all, *narrative change* was noted across the interviews. Narrative change was significant at the second set of interviews. Participants began to wonder why the hand was not getting better as had been hoped and expected. Participants began to voice concerns about the lack of perceived support that they were getting from managers, family and friends. At the third and final set of interviews many participants *reinterpreted* their experiences. The researcher's *reinterpretations* also changed over the course of the interviews. It only became apparent at the third interview that many participants were unaware of the implications of returning to work so quickly after sustaining their injury. After the third interview the implications of this decision became clearer. The difficulties that arose due to the lack of planning when returning to work became apparent. Viewing the interviews in their entirety and retrospectively afforded an opportunity to view how changes occurred over time.

It was important, while this movement between the whole-parts-whole took place, not to add understandings or meanings that were not within the data as it presented itself. In this way "*new horizons of meanings can emerge*" (Dahlberg *et al*, 2008, p.237). An attitude of carefulness and reflection was needed to try and not make definite what is indefinite by bridling the pre understandings and assumptions of the researcher.

4.7 Trustworthiness

A qualitative approach and a reflective lifeworld research approach has been used in this study to gain insights into the experiences of individuals returning to work while managing a traumatic hand injury. Curtin and Fossey (2007) suggest that establishing the trustworthiness of qualitative research helps the reader have assurance that the findings presented have qualities that merit being recognised as being of worth. Finlay (2011) stated many studies focus upon individuals' lived experiences but they cannot be considered phenomenological if they do not attend "*to the phenomenological attitude and the underpinning non-dualistic philosophical theory*" and therefore could be best considered phenomenologically inspired or

orientated (Finlay, 2011, p. 26). Norlyk and Harder (2010) add that, in their survey of phenomenological nursing research, it was common that authors did not highlight or describe the phenomenological approach in detail, or that the principles of the phenomenological philosophical perspectives were often poorly clarified. Many authors have developed criteria to ensure that rigour is maintained in qualitative research (Lincoln and Guba, 1985; Creswell, 1998; Finlay, 2006). The need for rigour through the use of such criteria is necessary to ensure a systematic, accountable and high quality research methodology (Ballinger, 2004) but Dahlberg *et al* (2008) add that the strength of qualitative research depends on the diligence and judgment of the researcher, not on an adherence to a method as the researcher is in fact the research tool.

In reflective lifeworld research the terms validity and objectivity are used to describe the scientific value of a lifeworld research study. Dahlberg *et al* (2008) argue that human existence is context dependent and cannot be context free. There is a need to discuss theoretical points and contextual factors which influence the form of research and the validity, objectivity and generality of its results. They add that objectivity and validity must be thought of from a phenomenological perspective which needs to include the assumptions which differ from an empirical perspective. As a consequence, there is a need to be 'scientific' and to discuss objectivity and validity but from a phenomenological epistemological frame work. To be objective researchers must "*adopt an attitude that makes us see the phenomenon we are studying through all previous thoughts, feelings and opinions that we hold in relation to it*" (Dahlberg, *et al*, 2008 p. 336). There is a need to see how the phenomenon under investigation was different from our pre-understandings. In this study, the researcher was prepared to be surprised and perhaps discover that any assumptions about the phenomenon were incorrect. Attempting to interrogate the data by using lifeworld-orientated questions that concentrated on its constituent parts proved a useful means of maintaining a distance from the data while looking for meanings (see section 4.6.2). The researcher in this study made many such shifts in understanding, mainly by re-reading the transcriptions, repeatedly listening to the recorded interviews and questioning the data by moving past what was directly being said or written and asking what was really going on, what was the context of the situation and how it was being described. Dahlberg *et al* (2008) emphasised the fact that the researcher must take the process of research seriously as findings produced may be used by health care workers who rely and depend on results produced to guide their practice. This view fitted with the researcher's

position as this study was undertaken with the aim of developing means of including patients' perspectives that would impact upon the development and implementation of rehabilitation interventions for this patient group. The need to be open was worked upon by the researcher by attempting to shift a focus from the medical and rehabilitative concerns and instead to attempt to gain insights into the experiences and perspectives of the participants. The researcher was aware that there was a possibility that the perspectives of the participants may contradict medical perspectives but such awareness enabled the researcher to remain open to such views. A realisation of the need to attempt to see participants' experiences in a new way was a driving force in this study.

In this study, the researcher attempted to maintain an open attitude by being familiar with the transcriptions and the audio recorded interviews. In addition, an "*attitude of carefulness and reflection*" was adopted (Dahlberg *et al,* 2008, p.241). New meanings that appeared to emerge were not taken for granted but were re-examined in relation to the transcribed interviews. It was essential not to make definite what was indefinite for as long as possible (Appendix 14).

Participants were not asked to read transcriptions to confirm findings as it was considered that this would mean the data would no longer be an insight into the naïve perspectives of the participants but a considered and reflected-upon opinion. Asking participants to reflect on transcripts even a week later will be difficult as their situation is continually changing. The longitudinal nature of the study means participants naturally reflect on earlier conversations at the later conversations. It was also clear to the researcher that having worked in this area of work for many years there was a need to look beyond responses that might be expected and instead to focus on the responses given. Participants would discuss their perceived progress and participation in their exercise programme for example and it was consciously decided to not respond to medical or rehabilitation questions but instead to direct them back to their treating occupational therapist. Having experience about the healing process of such structures did prove to be useful when exploring how participants' perceptions of their injuries altered over time. It was useful for the researcher to link reported experiences concerning the rehabilitation process as an opportunity to help gain insights into how participants adapted over time.

Ryan *et al* (2007) highlighted the need for the researcher to provide ample information for the reader to determine the dependability of the study. An audit or

decision trail, has been developed that included an example of an analysis of an interview (Appendix 10), how themes were clustered (Appendix 12), analysing the longitudinal component (Appendix 13), an example of the bridling process (Appendix 14), the initial readings of the transcribed interviews (Appendix 9). This provides an opportunity for each stage of the research process to be observable and clearly documented.

4.7.1 Reflexivity

Ballinger (2006) points out that the reflexive approach taken in a qualitative study needs to be consistent with the epistemological stance of the researcher in the study. In this study the researcher has used a reflective lifeworld research approach and therefore, instead of attempting to remain as distanced or detached as possible from the study, he actively strove to be fully involved and open to what may appear throughout the administration of the study (Finlay, 2011). Ballinger (2006) adds that it is also necessary not to become too introspective but to strive to maintain a focus on the phenomenon under investigation. This can provide an opportunity to focus on the lived experience of the participants and help discover ways of understanding the phenomenon under investigation in new ways.

In this study, it was important to set out how the thinking of the researcher changed through engagement with this study. This was done by keeping notes after each interview, transcribing each interview and continually revisiting each transcription to gain a sense of the mood, tone and pace of each. Notes taken after each interview were used as a means of recording the researcher's thoughts, interpretations and potential biases when interviewing and analysing data (Appendix 9). The notes were constantly referred to when analysing the data and provided an opportunity to work towards making explicit experiences and assumptions of the participants in order to gain potentially new insights into the phenomenon under investigation. For example, the researcher's understanding of participants' insights regarding their relationship with their managers and colleagues changed as the study progressed (section 5.6). The longitudinal component also provided an ongoing opportunity to check participants' perceptions and evaluations of their experiences. The process of analysis provided an opportunity to bridle or keep in check any rush to gain insights (Appendix 14) and to work with both the participants' descriptions and the researcher's emerging insights. Member checking was not carried out (section 4.7)

but preliminary findings were discussed with academic supervisors as a means of checking them and ensuring they were based in the data.

4.8 Summary

The methods used in this study were justified by the methodology described in chapter three. The methods used to help answer the research question using a reflective lifeworld research perspective included: the study site, recruitment and selection process, data collection process and methods of analysis. The methods chosen in this study were designed to reflect the research approach taken in this study: to gain insights into the experiences of hand injured individuals when returning to work.

Chapter 5: Findings: Stage one

5.1 Introduction

This chapter sets out findings for the first stage of the study. Initially a pen portrait of each participant will be presented to provide context to their experiences. These include photographs of their injured hand at the point of first interview. It was decided to include the photographs to provide a sense of the splint or wounds that the participants were managing.

The chapter continues with a description of themes that emerged from the data analysis. These themes emerged from interviews that occurred at three distinct points in time. The first of these were planned to take place as close to the point of injury as possible, the second as close as possible to the point that participants returned to work and the third took place after participants had been back at work for about six weeks (for those that returned to work). A major theme emerged at each interview point and each major theme had three sub-themes. Finally, the longitudinal nature of the experiences of individuals (how these experiences may have evolved over time) is examined.

5.2 Participants' stories

A summary of the participants' characteristics and injuries sustained are given in table 5.1. A more detailed picture of the participants is given in the following seven pen portraits, these describe the participants' home life, their work and how they damaged their hand.

Table 5.1: Summary of participants' characteristics

Participant	Gender	Age	Injury sustained	Type of work	Where injury took place
1 John	Male	40-45	Crush and fracture to 4th and 5th metacarpal	Service industry	At work
2 James	Male	30-35	Extrinsic flexor tendons, zone II and radial digital nerve	Service industry	At home, cooking
3 Christine	Female	30-35	Extensor tendon zone III R index finger	Healthcare	At home
4 Daniel	Male	20-25	Extrinsic flexor tendons zone II	Education	At work
5 Sharon	Female	26-30	Extensor tendon zone IV	Office worker	At home
6 Ian	Male	26-30	Extensor tendon repair zone III	Manufacturing	At work
7 Martin	Male	26-30	Extrinsic flexor tendons and ulnar digital nerve	Healthcare	At a party

5.2.1 John's story

John is a man in his mid thirties who is married with four children. He has worked for the same firm for six years as a driver. The company is small and employs five to six people. John's role is varied but is mainly made up of making-up orders for delivery, loading the supplies onto a van with a fork-lift truck, undertaking deliveries and giving and receiving invoices and payments before returning to the depot. He injured his right dominant hand when loading the van. He was trying to load a pallet of goods onto the van with a fork lift truck when the pallet slipped and became jammed. He tried to free the pallet with his hands. The loaded pallet slipped and crushed his right dominant hand, breaking bones of the ring and little finger. Due to the crush he also sustained a 'burst' injury to the skin and soft tissues (Picture 1). He underwent a surgical repair and k-wires were inserted to help maintain the alignment of the bones. These wires protrude through the skin on the dorsum of the hand and he reported that they were removed at six weeks following surgery.

Picture 1: John's hand

5.2.2 James' story

James is in his mid thirties and is both a student and works in retail. His work requires him to use a moped and sometimes to work in the shop. He lives in a shared house and it was while he was cooking his evening meal at home, he attempted to cut some frozen meat and the knife slipped and cut his left non-dominant hand.

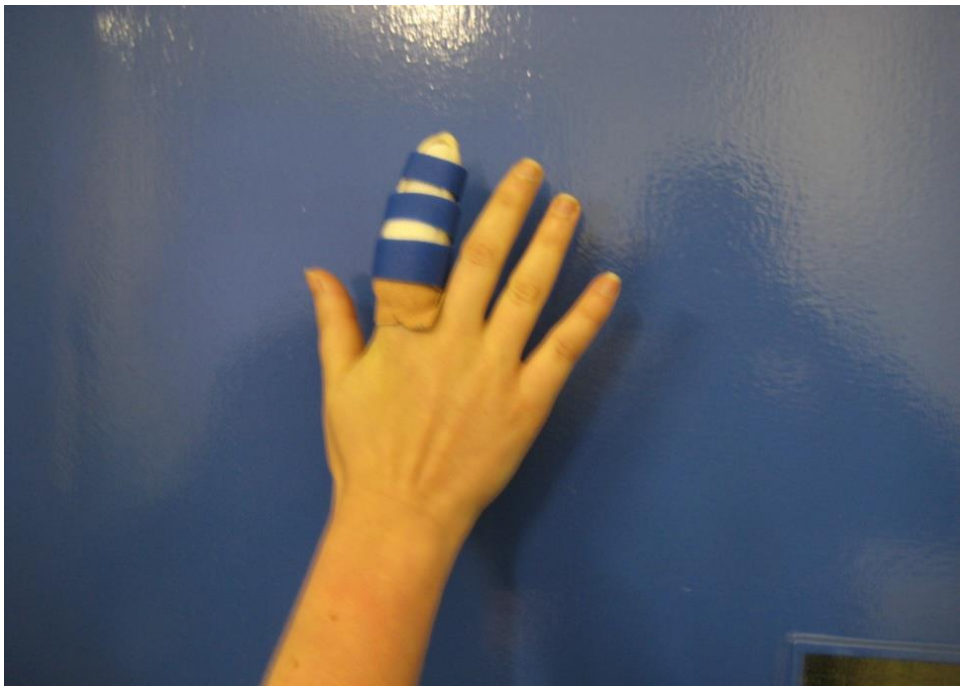
On being assessed in the Accident and Emergency department a lacerated tendon and nerve were suspected and he was booked for surgery. Three days later he had the operation and underwent both a flexor tendon and digital nerve repair to his left little finger (Picture 2). The post-operative rehabilitation regime for this injury consists of wearing a splint full-time for five weeks and part time for a further three weeks as well as being involved in an hourly exercise programme. The tendon needs twelve weeks in all to be able to cope with resistive activities. Following his surgery he was told that his job would be kept open for him. He planned to continue with his university course.

Picture 2: James' hand

5.2.3 Christine's story

Christine is a healthcare worker in her late twenties. She recently moved to a new flat and had bought new furniture and equipment for it. While unpacking a new kitchen knife, which was attached to a piece of cardboard with plastic cable ties, Christine tried to release it with a pair of scissors. The scissors slipped and she cut the middle joint of her right dominant index finger. She applied pressure to the wound and put some antiseptic cream onto it and covered with a plaster. She waited two days before going to her local hospital for an opinion. It was found that she had lacerated an extensor tendon on her right dominant index finger (Picture 3). The force of the scissor action also loosened a fragment of bone from the middle phalanx of the index finger. She lives in a flat-share with a friend. Following her operation, Christine would need to wear a splint full time for four weeks and part time for a further four weeks. The tendon would need twelve weeks in all to be fully healed.

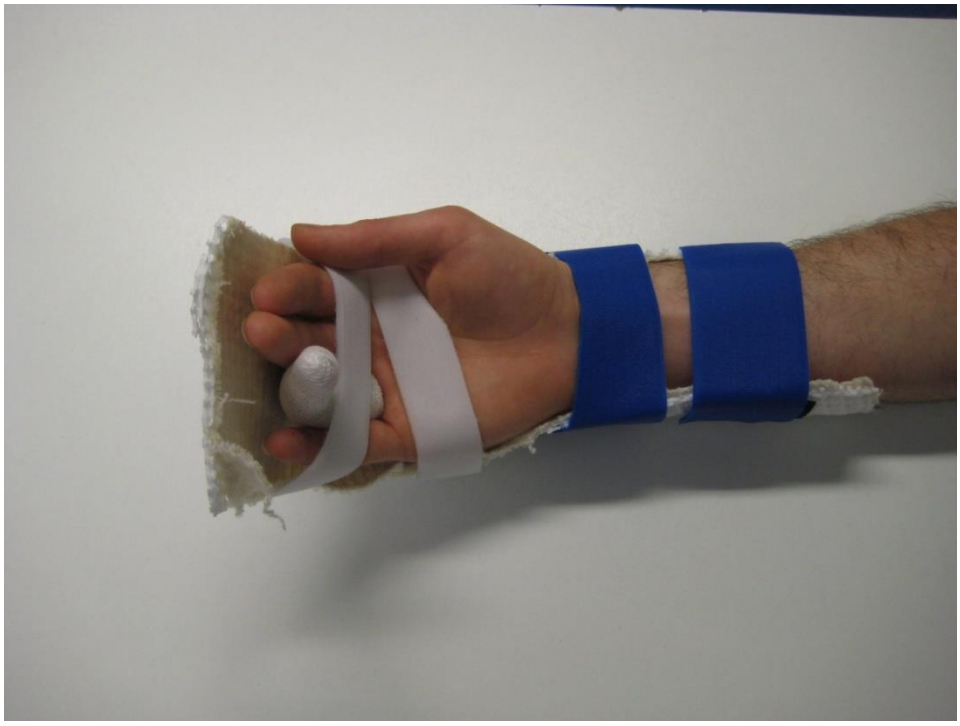
Picture 3: Christine's hand



5.2.4 Daniel's story

Daniel works in education and is in his early twenties. While at work he cut his hand on a broken glass bottle. He cut two flexor tendons and a nerve and had these surgically repaired three days after the injury (Picture 4). He would need to attend hand therapy weekly. He lives at home with his parents. Daniel would need to wear a splint full time for five weeks and part time for a further three weeks.

Picture 4: Daniel's hand



5.2.5 Sharon's story

Sharon is an office worker in her mid twenties. She lives alone. While cooking at home for a friend, her knife slipped whilst chopping food and cut the dorsum of her left non-dominant index finger over the knuckle. The wound bled a lot and her friend advised her to apply pressure to the wound. Sharon felt that it was just a deep cut and although in pain could move the finger so concluded that it would heal in time. Three days later, when the cut was beginning to heal she picked up something while at home and felt a 'pop' at the wound site and suddenly the finger could not lift up (extend) anymore and she was in a lot more pain. She went to her GP who suspected a broken tendon so referred her to hospital for assessment and possible surgical intervention. She was assessed by a plastic surgeon who confirmed that a tendon had ruptured and that she would need an operation to repair it. Sharon would need to wear a splint full time for four weeks and part time for a further four weeks to ensure the repaired structures would heal fully (Picture 5).

Picture 5: Sharon's hand

5.2.6 Ian's story

Ian is a man in his late twenties who works for a manufacturing company. His work involves him using tools and heavy lifting. He lives with his girlfriend and plays lead guitar in a band.

While at work, Ian opened a new tube of glue using a razor blade. He slipped while doing this and cut through the skin of his left non-dominant index finger on the dorsum of the middle joint. At the time he did not realise that he may have cut his tendon so he bound the injury and continued working. That night, he was playing a gig and midway through the concert the tendon broke and he went to hospital soon after. He later underwent a surgical exploration and an extensor tendon was repaired. Ian was unaware that he had partially cut the tendon at the initial injury and through use it finally ruptured later that day. Following his surgery, Ian had to wear a splint full time for four weeks. In that time he had to remove the splint hourly to carry out exercises (Picture 6).

Picture 6: Ian's hand

5.2.7 Martin's story

Martin is a recently qualified health care worker. He currently lives with his parents. He fell through a window and lacerated flexor tendons and a nerve to his left non-dominant index finger and he underwent a surgical repair. He started hand therapy the following week. Martin had to wear a protective splint full time for five weeks day and night and for protection for a further four weeks after that (Picture 7).

Picture 7: Martin's hand

5.3 Development of themes from constituent parts

Each participant was interviewed on three separate occasions, twenty-one interviews in total. As described in the methods chapter (section 4.8) each interview was analysed individually. Once the interviews were analysed themes were developed from each of the first, second and third interviews and then again longitudinally (Lewis, 2007). The findings from the interviews are conveyed in a way that reflects the three rounds of interviews by being made up of three phases. Table 5.2 sets out three major themes with a subtheme from each of the three interviews. These reflect the longitudinal nature of individuals' experiences (Table 5.2) in keeping with the methodology.

Table 5.2: Major themes and subthemes emerging from interviews in the first stage of the study

	Subthemes		
Major themes	**Interview 1**	**Interview 2**	**Interview 3**
1) the physical journey	naivety	reality bites	the new hand
2) the emotional journey	it's only a finger	competing priorities	regrets
3) contemplating work	expectations	it's not how I thought it would be	acceptance of the work-life

5.4 Major theme one: The physical journey

5.4.1 Subtheme one: 'naivety'

All participants sustained a traumatic injury to their wrist, hand or finger(s). Some of the participants did not initially seek medical advice. They had previous experiences of having suffered minor cuts and they considered that the new cut would not be so different and in time the injury would resolve itself like it had always done before. Other participants, who had sustained an injury that required immediate medical intervention, were surprised when surgery was indicated. Participants found it

difficult to understand the true implications of the injury and the impact it would have on their day-to-day lives.

When Sharon cut herself on a knife at home when preparing dinner for a friend:

Sharon *"… we was in the kitchen just having a chat and I was preparing dinner and things. I accidently slipped and carved my knuckle. So erm, I didn't think anything of it at the time but it wasn't bleeding a lot and my friend said, you know, just put some pressure on it and it stopped bleeding so I didn't think anything of it and I thought that's fine it wasn't gaping at the time so I didn't think it was bad…so anyway a couple of days passed and the wound was sticking back together so I didn't think anything of it. Obviously I think I created some damage already with the knife… I think it was about three days after. ..yeah…"* ***A 9-15****.*

But the usual healing pattern she had experienced in the past was not following its usual course. It was not until three days had passed that she finally sought medical advice. :

Sharon*: "I went to see my GP and he said basically that I'm worried that I've done some kind of tendon damage and to go straight to the hospital and so I was referred to the xxxx. It's the closest one and erm went to see a consultant. They came down and inspected my hand and said that basically I have cut a tendon in my hand. That was a shock. I didn't, I thought that maybe there was some bruising or something underneath. I never thought it would be as serious as that.*
Interviewer: *"So had he told you, did he tell you that?"*
Sharon*: "Yeah that I would need surgery and I was like 'oh no!'"* ***A: 27-35.***

Daniel also initially considered that his injury was not serious at the time he cut his hand on a glass bottle while at work. After his accident:

Daniel*: "At first I didn't think it was so bad, that it was just a bleeding finger"* ***A: 9-10.***

Again, a prompt was needed from others that he should have his injury examined at his local hospital.

***Daniel**: "…but then… as I work in a school and that, I was told to go to hospital to get some stitches and that." **A: 12**.*

Even at this point he did not feel that the injury would need anything more involved than some stitches and that he would soon be getting on with his life as usual again:

***Daniel**: "I thought like, people cut their fingers all the time, about a month before I cut my hand on a cheese grater and that probably hurt even more and there was more blood, so when I done it I thought it's just like before, I cut my hand, 'I'll just heal and it'll be fine' but it turned out to be a lot more serious than I thought." **A: 30-33**.*

When at the hospital he was told that he would need surgery which came as a surprise. In addition, he was not expecting that he would need to undergo an operation:

Daniel**: "I was a bit surprised at how serious it was. I thought I was gonna turn up, stick my hand out and they would sort it out and I'd go home and er, I didn't think I'd have to wear a hospital gown, I was quite surprised." **A: 51-54.

It was only then that Daniel began to have a sense of the seriousness of the injury.

Similarly, Ian had what he considered a minor cut to his finger. The type of cut was one that he experienced on a fairly regular basis while at work:

***Ian**: "Opening a tube of glue, a silicone tube of glue with a razor blade, not the correct Stanley knife but a razor blade, nice and easy and my finger slipped and I took the top of my knuckle, sort of half the top of my knuckle clean off. With one swift, gliding cut it didn't even hurt it was just so sharp. And I knew what happened and I just sort of looked at it, realised what it was as we cut ourselves quite a lot using these things, cleaning up glass and everything, because I work with glass and*

as I done it I bent my finger to see what was going on and it's like the whole top off my knuckle in a right angle was cut and was flapping off the top... I just cut a big flap of it off and it really hurt. Lots and lots and lots of blood, but I was on my own so I had to tape it up. I taped it up, cleaned it with a bit of tissue and when I'd finished the job and my hand was ok it was working I mean I wasn't bending it completely but I'd gaffer-taped the whole thing up..." ***A: 7-11.***

Ian did not consider that the injury was serious enough to stop him from getting on with his job. He was aware that the injury was painful and the cut very deep but he focussed on the fact that he could use it and could finish the job he was doing at that time. Later that night when playing guitar with his band:

Ian*: "We were playing that night and I was playing and all of a sudden it felt like someone had flicked the back of my finger with a rubber band (points to the back of his index finger) like that and my finger bent and wouldn't straighten and there was a lot of blood."*
Interviewer: *"So you ended the concert there and then?"*
Ian*: "I had to yeah, so to I went to hospital... so I had to go home drop off all my equipment as I didn't fancy leaving a van full of guitars and amplifiers in a car park. So I had to go home first."* ***A: 47-65.***

By now, Ian could see that he had seriously damaged his finger and that he needed to go to hospital. Even so he initially put the medical assessment off until he finished what he considered more pressing needs at the time.

The reality that the hand was injured did not initially prompt participants to seek medical intervention. They did not think the injury, although painful, was serious enough to warrant taking time out from their busy lives to have it seen to by medical professionals.

Christine cut herself opening a package with a knife when she slipped:

Christine*: "My hand slipped and the blade went right across my PIP joint. Erm... I mean I've cut myself, nicked myself with knives all the time and I wouldn't say I get*

queasy but I did feel a bit woozy...It was quite painful and that evening I couldn't really do much. The following day; the Monday I was off work that day because I was actually moving flat." ***A: 4-18****.*

Christine was aware that the injury was more serious than a usual cut, but she opted to go to her pharmacist for an opinion on the injury rather than seeking more appropriate medical advice. She prioritised other activities, like moving house and going to work over getting her injury reviewed:

Christine: *"I had so much to do on that Monday erm that I went down to my local pharmacist and got him to have a look at it. He obviously had no concerns from an infection point of view but obviously didn't know, what was going on internally. But him saying that it didn't look like there was anything to be worried about."* ***A: 22-26.***

Using her previous experiences of such cuts she chose to consider it to be minor as she was unaware that the injury may be more serious. She used her previous experiences to determine what she would do to manage the situation:

Christine*: "I cut myself before and my finger hadn't swollen like it did this time around. But, I think again it was just being like I had so much to do and it was like that wasn't my priority and I think it was Monday evening I had applied some antiseptic cream and put on some steri-strips and just kind of got on with things that had to get done."* ***A: 37-41.***

And although she had an idea that she had damaged the finger more than a 'usual cut' she went into work the following day. She tried to continue with her usual daily routines and waited until she realised that the finger was not following the healing pathway she expected:

Christine*: "And on Monday evening was when I started to get a little bit worried about it. Because it was extremely swollen in comparison to my left index finger and I was noticing that it was slightly flexed at the PIP joint. I could straighten it but it was very effortful and very painful. So I went into work the next day …"* ***A: 43-45.***

Christine returned to work and she reported that her colleagues and manger were surprised that she had not had the injured finger checked by a doctor and she was encouraged to go to the hospital for a review. It was three days after being injured that Christine had her injured finger reviewed in hospital.

The participants, even when being assessed at hospital, were unclear about what the injury might mean and what impact the injury might have on their daily lives. The ability to engage in their usual daily activities, social and family relationships and their ability to work for example were considered. In addition thoughts about how to manage the injury were being thought about.

It was clear following John's injury that medical attention would be needed immediately. He caught his hand between a forklift and a pallet crushing part of his right hand. He knew the injury was serious and needed to be reviewed at hospital. It was only after surgery on his hand that it began to dawn on him that his hand injury was more serious than he thought and that it was going to impede his ability to function. Following surgery his hand was stiff, painful and had reduced movement:

***John**: "I don't know, it's hard to describe. Erm it was erm...I was getting some pain. And sort of …erm... And because of the metal inside I was feeling... Some wire, I don't know what, they described them as K-wires or something, I was feeling awkward and I..."*
***Interviewer:** "What do you mean awkward, awkward in what sense?"*
John**: "The feeling wise…I feel…..I don't know it's hard to describe...Yeah I thought I would be able to move but because they had a plaster in it was holding my finger like (he describes his hand being tightly bound in plaster). Because the plaster is holding it you can't move it so…"**A: 157-184.

John was not sure how long the recovery time would be. He was initially told that the k-wires would be removed in two weeks time (three weeks post injury). It was only then that John was beginning to understand the seriousness of the injury.

Christine was told by surgeons that her injured tendons would take eight weeks to heal. She expected that once this time had passed she would be able to use her hand again as she had done prior to her injury:

Christine: *"It could take up to twelve weeks to heal. My understanding is that it won't take twelve weeks for me to be able to use the hand functionally I wouldn't think. Hopefully I'll be able to use it for everyday tasks sooner but then it will be building up to normal use"* ***A: 157-160****.*

She was expecting the injured hand to regain its pre-morbid level of function. Ian voiced concerns about his injury soon after it was first injured:

Ian*: "I wasn't in that much physical pain. It was more...it was just more like I could've done something really bad to part of my finger, as I don't know really. I understand a lot of things about medical shit, about how tendons move and stuff like that. All I know is that, I know what they do but I know that I'd severed something because I know people who have hurt themselves. A friend of mine hasn't got the full use of these two fingers (points) and because of an accident he had and that and I'm like purely, you know with working and everything, I mean it's my index finger on my hand, I play guitar a lot, it's my love. You know what I mean? I was really like, quite worried but then when I went to the hospital on the Saturday, he said everything will be fine but it's more like, you know, I still didn't quite believe him."* ***A: 76-88****.*

James was also unclear but he thought that the length of his rehabilitation time would be six weeks. He reported that his injury:

"…will cost me and the thing is for six weeks" ***A: 34.***

Whilst trying to formulate a picture of the injury, participants did not understand or perhaps were not given any information about their injury:

John: *"So I just hope it gets better as soon as possible."*
Interviewer*: "Have they told you how long it could take?"*

***John**: "No I haven't been told. No one has been telling me how long it takes, I don't know really."*

***Interviewer:** "How long are those pins (in his hand) staying in there for? Have you any idea?"*

John**: "I don't know 'cause yesterday (at hand clinic) someone said it's gonna be another two weeks. So but even so when I come in I'll have another X-ray done. So if it's, if the bones are connected then I think they will take it off otherwise it might stay a bit longer." **A: 396-401.

Participants quickly became aware that the injury would have an impact on their ability to function in day-to-day activities. For instance, John has difficulty looking after his newborn child due to the injury:

John**: "They all go to school except the baby at home. So not enough fun with the baby can't take care of her with one hand you know what I'm saying?" **A: 349-351.

James was still upbeat about his hand injury and assumed that recovery would only be a matter of time:

James**: "...I can't use this hand because of my injury but I think because of some exercise it will be ok in a few weeks". **A:237-238.

With this reasoning James assumed that he would take six weeks off work. He informed his manager of this and that after this time he expected that he would be ready to return to work full time with no loss of ability:

James:** "I told them I will have six weeks off. They adjust according to your needs, she said (his boss) as soon as you feel you can come...After six weeks you carry on." **A: 580-594.

Martin opted to remain off work for the duration of his rehabilitation time. It has been about two weeks since his operation and he did not intend to return to work until his rehabilitation programme was complete.

Martin: “I think by the time I get back to work it will be nine weeks” (twelve weeks in all). ***A: 183-184***.

Examples from the findings of the constituent parts of the lifeworld: temporality, spaciality, intersubjectivity, embodiment and mood (Todres *et al*, 2007, p.56) in stage one of the study can be found in both this chapter and in Appendix 24. For the participants the injury has impacted upon their ability to function at their usual level. The fact of the injury confronted them with the need to consider how they would be able to regain the ability to limit the impact of their injury (embodiment). Participants sought information to help them get a sense of what the injury might mean and how long it might take to recover. Some relied on information from medical and rehabilitation staff, others spoke to family and friends to help make a decision on how best to manage their new situation (intersubjectivity). Others relied on their own previous experiences of being injured to inform their decisions about how best to manage the healing process. Participants discussed their injury with their manager or colleagues and discussions took place that assessed how the injury may impact on the workplace, family life as well as the healing phase (intersubjectivity). Some participants reported that they did not feel that they had time to be injured and that the injury would impact significantly on their ability to function (temporality). The healing time needed was also uncertain; some participants felt that they would just have to wait for the healing time to pass before they would be able to continue with their pre-morbid level of function. The need to engage with their exercise programme was reported upon but with the expectation that a recovery would be achieved.

5.4.2 Subtheme two: ‘reality bites’

Seven weeks after James’ operation, his hand was not working normally yet and still affected his ability to function:

“I can’t take a bath because I can’t ...with my hand, because water must not be used or touch here”. ***B: 261.***

He believed if he worked harder on his exercises the ability to use the injured finger and hand will improve. He wondered if it is because he had not done as much exercise as he should that his recovery was slow:

***James**: "I didn't do the exercises as she asked me, that is the problem."*

***Interviewer:** "Why didn't you do the exercises?"*

James:** "Because I'm going to work and all these things changing". **B: 249-251.

James realised he had competing priorities: the need to engage with his exercise programme as well as his daily work activities. He worried that the lack of progress of his injured finger was due to the lack of exercise he was able to commit to.

John discovered that after six weeks his hand was not recovering as well as he was expecting. He had felt that he just had to put up with the inconvenience of the injury for about six weeks and then he could get on with his life. Instead he realised that perhaps this was not going to be the case. He was surprised at how long his recovery time was taking. He thought:

*"…it was going to be alright very quickly" **B: 338**.*

John added that he was using his hand now more and more and that he could even drive but:

*"...it give me problems, like do small stuff I can't hold it properly. Slightly heavy things like the grip is slipping off my hand plus I feel heavy here (points)" **B: 316-318**.*

He still did not trust that his hand would be able to do anything more than basic tasks. He was wondering if functional use would return. He was trying to come to terms with the fact that his hand has not progressed as soon as he would have liked:

***Interviewer**: "Did you think that the injury would take this long?"*

John**: "No I didn't because they told me in six weeks you'll be fine. I gone home and thought 'that's alright, only six weeks.' But after six weeks when they took the pin off I still can't bend my hand, do nothing. I think what is going on?" **B: 186-189.

Being confronted with this potentially new reality of not having a fully functioning hand, John began to start thinking about his future options. In his case this meant a search for potential alternative areas of work:

***John**: "Still bad though, still bad 'cause it's a right hand and I work with my right hand you know I'm right handed and basically I'm good with my hands. If I can't use my right hand properly, I'm really stuck with things. And that's it."*
***Interviewer**: "For sure."*
John**: "So I'm going to do something or learn something else with my hand I'll find difficulty to do it the proper way... Let's see how long it takes? I thought it was going to be alright." **B: 211-217.

John realised that his injured hand was not healing or regaining functional use as he thought it would. He thought that the injured hand would have healed by now and allowed him to get back to a pre-injury level of function. He was still not able to use the hand and was beginning to consider the need to think about alternative future options, particularly concerning employment. The reality of the impact of the hand injury on his ability to get back to work was becoming clear to him.

Daniel was also surprised how long the rehabilitation programme would take and the intrusiveness of the post-surgical rehabilitation time. He chose to return to work only two weeks after his surgery. Daniel felt that returning to work when he did:

*"... hasn't done the tendon any damage, it's been good to get out of the house. I felt a little bit guilty as well...I think, well it's just a finger I would have felt a bit guilty if I had stayed home for that." **B: 125-127.***

He was having difficulties with general activities of daily living; he reported that his daily tasks took much longer to do. It was beginning to become clear to him that his injury was having an impact on his usual roles:

Daniel**: "I think everything takes a lot more time, it's frustrating. It's funny there aren't that many men at work and I'm the tallest erm, so I'd be a bit, I'd always get asked to do stuff, like opening windows and stuff. So I've been relegated a bit and people don't ask me anymore." **B: 58-60.

Daniel was only three weeks into his post-operative rehabilitation phase and he still felt that his hand would recover and he would return to his pre-morbid level of activities and thought that he would just have to: "*wear the cast for a bit and I'd get back to normal really*" ***B:17-18*****.** His focus was on getting on with his day-to-day activities as close to his pre-morbid level as he possibly could. He participated in his home exercise programme but prioritised his day-to-day activities. He only exercised while on the train to and from work:

Interviewer*: "Exercising? Incorporating them into your normal day?"*
Daniel: *"Er, yeah. While on the train."* ***B: 131-132.***

Daniel felt that he just had to endure the healing period and then once the healing time was complete he would be able to get back to his usual day-to-day activities.

When John first injured himself he was worried that he may knock his healing hand. He sustained a fracture to his hand and the bones were held in place with pins to keep the bones aligned while they healed. John was worried that if he left his home his hand would get knocked which would cause pain and potentially damage his repairing structures. He opted to mainly stay at home:

John*: "Well, erm because of the injury I'm not feeling like going out...with pins inside, people rushing up someone might come on to you...it's very, you know worrying things so I'm basically staying at home all the time"* ***B: 317-325.***

Participants were getting to the point where they were using their hand functionally a bit more and warily testing it out. The injury took longer to heal than initially anticipated and many reported that they expected that their surgical repair would have healed sooner and the impact on their ability to use the hand would not have been so great.

Ian returned to work after two weeks. He felt that he would be able to do most activities but felt that he may have started using the hand too soon:

Interviewer: *"Did you feel that you put your hand at risk?"*

Ian**: "Yeah! Definitely! We had to take a six meter tank out in a flat right on the river. So it was freezing arse cold, getting hold of that it just stiffened up. It stayed for a while it went from like 30 degrees to 70, to like down here (the finger bent and not able to move) luckily I could get it back but after the day's work I could only bend it to forty five degrees. I thought 'don't tell me I done this'."* ***B: 146-152.

He was also worried about the possibility of re-injuring his hand. He knew that it was not yet healed so tried not to use it. He witnessed a colleague opening a tube of glue with a blade, exactly how he himself cut his own finger:

Ian**: "Don't! Be careful you prick. He goes, 'I'm right, I'm alright'. I'm telling ya, I can't even look at it."* ***B: 152-153.

Seeing his colleague nearly injure himself made Ian relive his own injury and highlighted the impact that the injury has had on him.

Christine also chose to go back to work early, after only two weeks:

"I got extremely bored because everyone else is at work and there's only so much you can do and only so much day time television you can watch so I had to go back to work. For my own sanity really. Obviously by going back to work, it has impacted upon my exercise regime but I think it had to be done really." ***B: 127-130.***

Her occupational therapist gave her instructions about the amount of activity she was able to do whilst the hand was healing:

"*So on Thursday at hand therapy I was told then that I was only allowed to minimally use the whole of my right hand because the things are interconnected so they said that, when I asked what minimal use was they said brushing my teeth very lightly."* **B:155-158**.

The reality of their situation becomes starker to most participants at this point as the injury is taking longer to heal than initially anticipated. While the injury is healing their daily lives are going on and they are being confronted by the needs of their families and friends, work and the responsibilities of their day-to-day lives. Some of

the participants were realising that just getting through their estimated healing time alone would not be enough to ensure a return to full functional use. To some participants, it was becoming clearer that the healing time was going to be longer than initially anticipated. They were still reporting difficulties with their ability to participate normally in day-to-day activities. This realisation, added to the fact that the injury had not fully recovered and function was still reduced could have an impact upon choices made about their future. Many felt that putting up with the inconvenience of being one handed for six weeks would be manageable. But now the fact that the hand injury had not fully recovered and the prognosis was quite vague introduced an element of uncertainty in their planning (embodiment). Some had chosen to return to work. Some participants were beginning to wonder if they would ever regain functional use of their injured hand, and if it would be the same as before. They needed to rethink their expectations of the recovery and a level of uncertainty as to how the hand might recover was voiced (mood).

Some participants who had returned to work felt that colleagues misunderstood the need for them to work at a reduced level (intersubjectivity) and they found they were under pressure to work at a level they felt uncomfortable with (mood).

5.4.3 Subtheme three: 'the new hand'

It was now six months since James' surgery, he did not realise how long the injury was going to take to recover:

James: *"I don't think so. I don't think so when I first came to doctor he said 'ok we are going to operate tomorrow' and when he did the stitches and all that I asked him how much time it takes and he said 'six weeks'. Six weeks I cannot, I don't ..."*
Interviewer*: "Did you think that was short or long?"*
James*: "At the time I think it was a long time. Now I don't think it was a long time. So thank God, because I am going to plan to run away because it takes a long time (if he knew at the beginning)".* ***C: 46-52****.*

And again:

***Interviewer**: "Would it have been useful to be told it would take longer than six weeks?"*

James**: "If they told me this so I would be more depressed. Six weeks is a big time for me. If I was told longer it would have more of a negative effect upon my mind." **C65-67.

James felt that at the time he was going to have his surgery he thought the recovery time would be six weeks. At six months his injured finger was still not moving how it was prior to the injury. He felt that it was helpful not knowing that the whole process would take six months. If he had known this at the beginning he would have felt overwhelmed and perhaps lost heart. The fact that all progress was slow allowed him to adapt to his new situation and begin to accept the outcome more readily. This has been possible as he can see that *functionally* his hand is alright even though medically the outcome is perhaps only fair. He has returned to his job and his university course and is managing both to a level he is happy with:

***Interviewer**: "How is your hand now?"*

***James**: "My hand is 90% OK."*

***Interviewer**: "Really?"*

James:** "Yeah, 90% OK. I think the tendon and all the things are joined inside and the only thing that I have been left with is that it (the finger) is not 100% straight. Yeah, it's 90% straight." **C: 34-38.

James found it difficult to accept that his friends did not help him as much as he felt he would have helped them if the roles were reversed. Once he realised this he felt he became more resilient and independent as a result. He felt that this was a positive outcome from the experience:

James:** " For all daily life routine works, you cannot do all these things and no one is going to help you, or maybe they can help you for one day or they can help you for forty to sixty per cent of things they can help you... One or two or three maximum days after that they are not going to..." **C: 130-135.

It was now six months since Daniel's initial injury. He had returned to work and was using the hand for day-to-day tasks. The injured finger was not working fully but he

was able to accept this as he could use the hand for his day-to-day activities. In addition, he felt the amount of time the recovery phase took gave him an opportunity to get used to the end result by testing the recovery through using it:

Interviewer: *"So you think everything has changed much more slowly. What do you mean by that?"*
Daniel: *"...it just seems to have gone quite slowly so I just got used to it."*
Interviewer: *"Do you think it's been helpful to have it that slow?"*
Daniel*: "I think so yeah. I can imagine being told I think, when it happens it's going to be like that (bent) you'd probably panic but when it takes so long you kinda get used to it over a period of time. It's not that much of a problem."*
Interviewer: *"Is that because you can still use your hand?"*
Daniel*: "Yeah, I think..."* ***C: 50-58.***

Daniel felt that his injured finger was still not moving well even though six months had passed since his surgery. The finger was not how it was prior to the injury but was stiff and unable to fully flex or extend:

Daniel*: "It's still bent so that gets in the way when I'm trying to do that but apart from that I can't think of many things (that I cannot do)."*
Interviewer*: "Can it go into a fist? It can bend quite well but you can't bend the tip. It's fixed in like a c shape. Is that how you thought it was going to go?"*
Daniel: *"Not really no, I didn't really imagine that it was going to end up like that, no. But I've kind of got used to it now. Yes it is a bit weird that it has ended up like that, especially not what I was expecting when I just cut my finger."* ***C: 8-15****.*

He had made a shift in his thinking from the previous interview when he felt that in time the finger would have got better and that the whole experience would pass. He felt that he would have to put up with the inconveniences of being, in effect, one handed. But as time went by he changed this view. He did not view a successful outcome in terms of regaining his pre-morbid level of function anymore but instead viewed it in functional terms. He reported that he could use his hand for all his usual daily activities and was getting used to his 'new' hand. He had to adapt some tasks

but he was able to do everything. He appeared to be a little disappointed with the outcome he had got but had concluded that all-in-all the outcome was fine.

Christine also felt that at six months post injury that she was getting on with her daily activities. She felt that the range of movement of the injured finger was not ideal but she was able to get on with her daily tasks without much difficulty:

***Interviewer**: "... you can use your hand normally and it's not getting in the way enough to stop you from using the hand?"*
***Christine**: " I don't know, no I mean with certain circumstances when I'm like conscious, I mean it's not preventing… my finger isn't preventing me from using that hand functionally so erm, but the finger isn't kind of getting involved. I tend to isolate it a bit." **C: 40-44**.*

She described how she had managed functionally since her return to work:

***Christine:** " …I think the only difficulty has been around there is a lot of writing involved in my job and I think it has impacted on the hand writing. Not…I think it's just my hand gets a bit tired quicker. I think it's probably holding the pen in a slightly different way to the way I was prior to the injury and it's just getting used to that grip. So I must admit, because my work load hasn't reduced so I'm tending to type a lot more now. It's a lot quicker if I type. But by doing that I'm not really going to improve on…by reducing the movement of the finger. I compensate." **C: 57-64**.*

She felt that in some ways she was not happy with the range of movement that she achieved but was happy with the level of functional engagement she had achieved:

***Christine**: "Like day-to-day it doesn't impact, but if I could get a bit more range I'd like to because it's a bit strange looking and I'd like , if I got a bit more range than I'd be more likely to use it. Then this, I'm almost forgetting about my finger..." **C: 168-169**.*

Christine was not happy about the lack of movement in the injured finger. Christine differentiated between her ability to use the repairing finger functionally and the finger's lack of mobility.

Martin did not return to work until he felt his hand was fully healed:

***Interviewer**: "In hindsight, do you think you could have gone back to work earlier?"*
***Martin**: "erm...I don't think I would have wanted to. I probably could have gone back after three and half months...cause you can't put any weight through it for the first three months". **C: 16-20**.*

He followed the instructions of the treating occupational therapists:

***Martin**: "…while I had the cast on at first the therapist definitely helped with the exercises they would give me and reassurance and stuff like that. It would definitely help to take my mind off what I might have lost or erm what I still might lose."*
***Interviewer**: "So they helped you get an overall sense of…"*
***Martin**: "The possible outcome and prognosis. As well as that there was a surgeon who saw me when I was first in hospital; well she gave me the worst case scenario... (Laughs) so I guess the only way was up and I'm kind of optimistic." **C63-71**.*

Initially once the injury occurred most participants were surprised at the seriousness and the implications of the injury. They were unrealistic or naïve about the amount of time they felt the injury would take to heal and to allow them to regain a semblance of normal activity. Most participants were aware that it would have an impact on day-to-day function but were happy to put up with this as they felt that they would soon be back to normal levels of activity. At eight to ten weeks post injury, a re-evaluation was being made. The hand was not yet back to its expected pre-morbid level of function. Most participants struggled with this new reality. These participants had little information or experience to draw from. It was becoming difficult for some participants to see how their repairing hand might fully recover and concern was raised as to how this lack of recovery might impact on their ability to engage in their usual day-to-day activities (embodiment). An exception is with Martin who made up his mind that he would not work for the duration of the rehabilitation phase and closely followed instructions given to him by the treating hand therapists

(intersubjectivity). He then did not have to take into consideration decisions concerning being at back at work. Although Martin opted to remain at home he did not report feeling bored or isolated (spatiality).

Most participants had time to gain a sense of their new reality, how their often not completely recovered hand was now good enough to allow them to get on with their daily activities. James and Daniel were surprised that the rehabilitation phase took as long as it did, but were pleased that they were not told that it would take six months at the beginning of their treatment, just after their injury as they felt they would have been overwhelmed by the enormity of the injury and its potential implications (temporality). The idea of the injury taking six to eight weeks appeared a long time to the participants when first injured. It appeared difficult to know how they would be able to manage this amount of time. At the final interview the fact that it took much longer was often viewed as an opportunity to get used to the new reality of how the hand would recover.

5.5 Major theme two: The emotional journey

5.5.1 Subtheme one: 'it's only a finger'

As discussed in the previous section, most participants found it difficult to come to terms with the idea that the injury they suffered would have as great an impact as it did on their day-to-day function. They had experienced similar injuries many times before which had usually resolved themselves. Even though many of the participants underwent quite complex surgery they found it difficult to understand the potential impact it would have on their lives. Some participants returned to work soon after their surgery, even before the repaired structure was completely healed. Once individuals had recovered from their surgery they reported that they felt well, but they had the inconvenience of having to wait for the repairing structure to become strong enough to cope with the stresses and strains of daily living. It was reported that it was difficult to understand that the injury could have an impact upon their ability to function. This idea that 'it's only a finger' highlights this, and decisions that followed may be rooted in this idea.

Christine was questioned by her friends about why she had not yet returned to work about one week after her surgery:

Christine: *"I live with my flat mate and she can see how difficult things are but I don't think my other friends quite understand and I think you know that they are shocked that I am not back at work".*
Interviewer*: "Have they told you that or is that what you think?"*
Christine: *"erm, in a sense they have said 'oh, you're not back at work yet?' They haven't asked why. There's that shock that I'm not back at work. I feel I've got to justify why I can't be at work."* ***A: 399-406.***

Her friends' opinions did play a part in her decision making. Christine reported that her friend found it difficult to understand why she was taking time off work following her injury. The need for Christine to take time off work after her injury was not clear to them and they seemed to be unaware of the impact on her ability to engage in daily activities. She maintained a high level of communication with her line manager and even contacted them on the day of her operation:

Christine: *"I'd already been into work that morning (of the accident) and they knew I was heading to A&E and when I found out what was happening, that I was going to be going to surgery I phoned them up and let them know and said it's going to be sometime this afternoon (the operation) so I'm feeling I'm not going to be at work tomorrow. They said right 'that's fine, we'll cancel all your patients'."* ***A: 143-148.***

Even though Christine works in healthcare, it was clear through her report that they did not have insights as to what the injury would mean and the impact it might have. When Christine was off work, although physically able, she chose to rarely leave the house and as a result felt isolated:

Christine*: "...I'm worried that someone will see me."*
Interviewer*: "Someone you know?"*
Christine*: Someone I know, someone I work with. Like they would see me and think …that again...the whole thing like, a friend of mine who I work with came to visit me last night and I was asking her what do people at work think? Do they think, oh she is taking time off, she has just hurt her finger and 'no they are all really worried about you' and wanted to like, again it's this guilt thing I don't want people thinking that I'm just milking this injury."* ***A: 341-393.***

Christine felt guilty that she was taking time off because of an injury she still viewed as trivial. She also felt that as the injury and splint she had to wear were small, this did not convey to family, friends and work colleagues that her injury was serious. She was worried that people would think that she was not really able to function fully:

Christine**: "...it's not kinda noticeable, I look fine if you look at me and I don't look ill and I just feel that maybe other people don't quite understand". **A: 407-409.

Daniel also felt that the injury was small and did not feel that others would have understood if he took any more time off work than two weeks:

***Interviewer**: "So are you pleased you went back to work as early as you did?"*
Daniel**: "Erm yes I think so. I think …yeah it hasn't done the tendon any damage, it's been good to get out of the house. I felt a little bit guilty as well...I think well it's just a finger I would have felt a bit guilty if I had stayed at home for that." **A: 460-468.

Sharon returned to work a few days after her operation as she felt guilty taking time off following her injury. She was aware that her work place was busy and she wanted to help out with the work as much as she was able and not leave her colleagues struggling:

***Interviewer:** "So work was really busy?"*
***Sharon**: "Really busy."*
***Interviewer**: "And you had the operation on the Thursday and you went back to work on the Monday?"*
***Sharon**: "Yeah."*
***Interviewer**: "Did you feel able to go back to work on the Monday?"*
Sharon**: "Yeah, I felt OK in myself and erm...I said to my boss, you know I'll just try and do what I can. I'm more of a typist so it was a little bit awkward so I was just trying to do things one handed." **A: 57-66.

Her return to work plan was very informal and she tried to make it clear that her hand was not fully functional but she would come back anyway to help out work as it was a busy time. Her boss took the lead from Sharon that she was going to be able to work if she returned and accepted her reasoning:

Sharon**: "First of all I felt pretty useless a bit guilty and that but erm you know it's just one of those things. It's not anyone's fault it's just an accident that's happened that's unfortunate." **A: 176-178.

She reported that she felt guilty as she blamed herself for the accident and wanted to try and get on with her usual activities including getting back to work:

***Sharon**: "Yeah, I suppose in a way I know it was an accident in a way at the back of my head, at the end of the day I've done this to myself."*
*I**nterviewer***: "*Really is that how you felt*?"
Sharon**: "Yeah I felt I was just being a bit hard on myself just thinking this is my own fault, no one else was to blame, you've got to get on and do your job." **A: 306-308.

Ian also chose to return to work after only two weeks. He partially lacerated a tendon cutting open a tube of glue with a blade. While he was off work a colleague came to visit him:

***Ian**: "…the other guy I work with came out to see me, when I had that big boxing glove on (his splint) and like "what are you like? Literally you can't do anything?' and I goes 'no'. I've been at home for a week going insane watching films and er, just stuff and not really doing much but …"*
***Interviewer**: "Just bored?"*
***Ian:** "Just bored really."*
***Interviewer**: "So you'll be at work doing light work?"*
Ian**: "Yeah, I'll be going around doing smaller bits and then helping out wherever I can but it's not going to be no problem at all really. I have a smaller cast on the finger, but I still got the stitches on it so I still can't get it wet. I can't get it wet or lift anything heavy which is basically things I've gotta do every day but there are ways around it." **A: 225-236.

Ian was bored being off work and was eager to return to work as soon as possible. Ian reported that his colleague did not appear to really understand the impact of his injury and it was only when he visited him that he realised the extent of Ian's injury. Ian himself felt that his injury was not worthy of him taking time off and was pleased his colleague had seen the impact his injury had had. In addition Ian planned to return to work as it was a busy time. He wanted to get back and help his colleagues. His boss was happy to hear that Ian planned to come back to work as soon as he did:

***Interviewer**: "How was he when you phoned him (the boss) up?"*
Ian**: "Yeah he was fine, because he's like more worried I think that I wouldn't be coming in for a bit or I'd jack it in or heaven forbid I'd get an ambulance chaser to ring 'em up and try and get some money out of them. You know what I mean? None of that's my style."* ***A: 270-274.

Ian felt bad about being off work and was happy to return and help his colleagues. A loose return to work plan was developed and he had faith that everything would be all right once he returned to work.

John's life roles changed once he was injured. His wife has had to become the sole carer of their four children, including a new born baby. He was unable to help much with the care of the children which he found difficult but he partly chose to reduce his contact with them as he was worried that they may inadvertently harm his injured hand:

John**: "Hard. One day the little one comes in they start you know but still make me worried, you know the one three years old jumping up... Make me "oi!" (cry of pain) and move my hand."* ***A: 353-356.

In addition his wife has had to help him with functional tasks. He was aware that the extent of his injury kept him from helping her:

John**: "...but er, as far as I can see she is in a bit of a situation that she has to look after me as well."* ***A: 372-373.

And again:

"...she needs to help me out with it so she's more occupied with me as well as the children." ***A: 386-387.***

Since he had been unable to work his family had been experiencing financial difficulties:

John: *"...can't earn anything...money, money is really important in life. 'Cause I'm stuck with my bills, rent, everything."* ***A: 222-226.***

Many of the participants took time to fully grasp the seriousness of their own injury and the impact it would have on their day-to-day functioning. Most underestimated the impact of the injury. Many participants told their supervisors that the impact of the injury would mean that they might need some temporary modifications to their usual daily tasks. Many participants reported that their managers were happy to allow them to return once they were contacted by the participants and were told that they felt that they would be able to return to work. A sense of guilt on behalf of many participants also emanated from this lack of insight about the meaning of the injury. It was felt that taking time off to allow such an injury to fully heal was not an option. Most of the participants who opted to return to work reported that they felt that others would not understand that the injury was serious and had a profound effect on their ability to engage in day-to-day life. Many participants reported feelings of guilt as now they were unable to fulfil these roles – perhaps due to their own belief that their hand trauma was too trivial a thing.

5.5.2 Subtheme two: 'competing priorities'

Sharon went back after work after only three days following her hand surgery as she felt that her company were short staffed and it was a busy time. Six weeks after her injury, she felt that the hand injury was progressing well and functionally she reported that she only had difficulties with heavy carrying tasks. She was keen to return to work as soon as possible after her surgery but once back she felt that she was immediately under pressure to do her usual level of work while being one handed. She felt she should have got some help from other members of her

department, not her immediate team but other colleagues that she shared an office with:

Sharon: "*Yeah, when we was going through our busy stage it just so happened that someone was off on my team, we was sort of, only me as half a person and er, and another lady I work with. We work quite a lot on a large team so...there wasn't any help offered basically, so we just dealt with it yeah."*
Interviewer*: "It's quite a small team isn't it?"*
Sharon*: "We are on a small team of three, but there are like three teams on one of our desks, quite a large desk and we all do different variations of work. They are capable of helping, doing that job, they don't know it in and out but even silly things like doing some faxing, or picking some work for the printer for you, just being a bit more noticeable and er, you know what I mean, they didn't really help at all."* ***B: 53-60.***

Sharon felt that she was unsupported when she first went back to work. She felt that her colleagues who worked for a different team but in the same office space should have helped her more, or at least offered to help her. She had made an unspoken assumption that as she was aware that her hand was not fully functioning yet, others would be aware of her difficulties too. The reality was somewhat different as once Sharon was back at work her boss was away:

Sharon*: "Well my line manager was off; he was on holiday for the two weeks I had off, so he wasn't around to delegate and shifting people 'round. So maybe yeah that would be the first change you know, would have been having someone as a manager when I was back to work after my injury. There was no one, I didn't feel like I could speak up and say hang on, let's re-arrange the department, so you know I'm doing the simple things and people are doing the more complicated tasks..."*
Interviewer: *"To cover for you. Did you have that conversation with anybody? Or were you hoping they would just be aware?"*
Sharon*: "Yeah, I was more hoping that they would be aware but they wasn't. But because I work with (name of colleague), she's been a diamond so..."* ***B: 65-73.***

Sharon felt it would have been better if she was supported and perhaps this may have been facilitated if her colleagues understood what her injury was and what impact it was having. She did not feel able to ask for help and felt powerless to do anything about this.

When Ian was making his mind up about returning to work, he was promised he would be allowed to do light duties. He was getting bored being off work but a major factor in Ian's decision making to return to work was when he found out that his boss decided not to pay him for the two weeks he had taken off due to the injury and resulting surgery:

***Interviewer**: "...has he said why he wouldn't pay you?"*
***Ian**: "Because it was my fault apparently?! Because I slipped, my hand, the silicone tube which I was opening slipped down as I cut forward with the blade. It wasn't towards me. I didn't think that I'd have the sense to cut away and the tube slipped and I opened my knuckle up."*
***Interviewer**: "Sure."*
***Ian**: "The top of knuckle and he said 'oh, I told you a million times to be careful which is like you know, well that's not training is it?"*
***Interviewer:** "He said basically that you..."*
***Ian**: "Yeah it was my fault for not opening it properly and for rushing and he's not responsible for it so why should he pay me? Bearing in mind I've worked quite hard for three years for this geezer, I mean it's not as if he pays me much anyway." **B: 28-39**.*

Ian reported that he felt let down by the attitude of his boss. He felt the rationale for the decision not to pay him was an arbitrary one. Ian felt that his boss should have taken into account all the favours he had done for him over the years he had worked for the company. He changed the tone of his language from initially reporting that his injury was just an accident to a more hardened tone. He described being angry at his boss and has changed his opinion from seeing him as his friend and peer to one where he now viewed him of being more distant and very much a boss. Ian felt there was an element of truth in the fact that he did not follow proper procedure when opening the tube of glue and that by injuring himself he had let others down.

Once he was back in work the realities of the job made it difficult for him to focus on just doing light duties. He was aware that his injury was still not healed and therefore not strong enough for him to engage in heavy lifting that is often required in his line of work. However, sometimes if some heavy lifting needed to be done he would be called upon to help out. He felt powerless to say no as he wanted to help his colleagues but he also was aware that by doing so he was putting his injured finger at risk. He felt that his manager did not understand how this might be the case and made Ian help out by belittling his injury. Ian felt unsupported as a result and began to feel resentful of his boss and wondering why, after all his years of support and good work, people were not supporting him in his time of need. Any sense of feeling guilty about not being able to help has now been tempered by his feelings of upset at his boss for not paying him and for not providing the support he felt had been promised:

***Interviewer**: "What was it like when you first went back? Going back to work with your hand in a splint?"*
***Ian**: "It was alright because I didn't have to do much. I was on light duties. You know I work with aquariums?"*
***Interviewer**: "Glass, carrying…?"*
***Ian**: "Couldn't do any of that but there's plenty of wiring up to do and dry plumbing doing stuff like that I'm right handed so it's alright it's just to steady it so it's alright but it's like they just don't understand. I said, I can't lift anything heavy, I can't lift anything heavy at all. I can with my right but I can't with my left. "OK; you've gotta go to this job tomorrow we're taking out this tank you've got to take it out". "OK". It's six meters long. Six meters long and weighing a ton. Like that. I was like "what am I supposed to do?"*
***Interviewer**: "Why do you think they didn't get it?"*
*I**an**: "Because they don't listen 'you'll be alright, be alright.'"*
***Interviewer:** "Even though you told them, you cut a tendon?"*
Ian**: "Yeah, apparently that's my own fault and I've just gotta get on with it..." **B: 103-118.

He felt guilty on two fronts - firstly, that he was unable to help his colleagues when they needed him and, secondly, that he was putting his injury at risk by doing so. His

return to work plan was informal in nature and it did not give Ian protection once he had returned:

Interviewer: *"What did he think when you said I'm going to come back in and you said to him, my hand's not right and he put you on light duties. Did you discuss what that would mean?"*

Ian*: "Yeah I did, it's just wiring stuff up and electrical work and doing like fiddly bits. It's cool 'cause like we work on our own a lot or we work in pairs it's not as easy as that. Like if I worked, I don't know, if I worked for a big building company and there was lots of us there and they said, 'alright man you screwed your hand up, how about you just sweep up and make the tea for a couple of weeks.' It don't work like that because when you got two people in a room you've got a long glass lump. You can't just go well what am I going to do (not help) because at the end of the day they're my mates you know what I mean I'm not gonna start saying, 'Oh I can't lift that things up like', I'm gonna be lifting my finger out instead of grabbing hold of it. I can now. I'm just helping them out."*

Interviewer: *"Was your hand at risk*?"

Ian*: "Yeah! Definitely. We had to take a six metre tank out in a flat in xxxx right on the river. So it was freezing arse cold, getting hold of that it just stiffened up. It stayed, for a while it went from like 30 degrees to 70, to like down here, luckily I could get it back but after that day's work I could only bend it to 45 degrees. I thought don't tell me I done this. It was just the cold and she goes have you been over using it and I went yeah and that's when I actually thought, there's no way on earth that like, this geezer's not even paying me, there's no way on earth, I'm gonna have this finger, hopefully for all of my life."* ***B: 146-152.***

It was difficult for Ian to refuse to help his colleagues as he did feel that his injury did not appear to be serious enough to stop him from helping. In addition his colleagues did not understand his dilemma and cajoled Ian into helping out too.

Ian was feeling confused about his choice to return to work when he did. He was aware that he was bored when off work and did not realise the true impact such an injury would have on his ability to do his job fully. He was promised a phased return

to work by doing light duties but this plan was vague and undefined. The return to work plan was informally arranged over the phone. Once he was back at work, the tone from his manager changed, now that he was back at work it was expected that he would do whatever work was needed to be done. Ian was aware of this and felt guilty that he was unable to assist his mates as he felt he should and that his mates had to help him. On one level, he did not feel the injury he had would allow him to not assist when it was required so he chose to put his injury at risk rather than not help out. He felt guilty about this risk to his own recovery.

Christine maintained continual communication with her manager following her injury. Her manager was supportive and even devised a return to work plan for Christine. Christine worked in a hospital and another member of staff, a rehabilitation assistant, was identified to help Christine if required with her work once she returned to work. Christine felt that her manager was:

***Christine**: "...aware how much this is going to impact upon my job and is very understanding and we spoke about when I do go back to work that having a rehab assistant working alongside me who could do things like write my notes up and so on."*
Interviewer: "*So she's been working out a plan to help you come back*?"
***Christine:** "I don't want to be off work."* ***A: 299-305**.*

Christine was worried what other people might think. Whether they would feel that her injury is serious enough to warrant time off work.

***Interviewer:** "When you have been out and about how has that been?"*
Christine**: "Erm it's been fine but like I'm worried that someone will see me."* ***A:418.

Even though this was put in place Christine did not always feel able to take advantage of this, she would put her work before her rehabilitation, would cancel hand therapy appointments to allow her to attend work meetings for example, even though she had been allowed time off for rehabilitation. She felt guilty that she needed help at all from her colleagues and did not use the assistance offered as much as she could have.

5.5.3 Subtheme three: 'regrets'

Five months after Christine's surgery, she had returned to work but felt that her hand had not progressed as well as she would have wished:

***Interviewer**: "What's your opinion about the hand and how it's coming along?"*
Christine**: "Erm, I mean I'm not impressed. I do think it's partly due to me not being the ideal patient you know. Obviously you are given an exercise program and I don't think I am complete, you know I'm not completing it as regularly as I should doubt it's just yeah, it's just trying to fit it in around work, life and unfortunately I do feel that sometimes I do forget about that finger and I do need someone to remind me." **C: 24-31.

She felt guilty about her perceived poor progress and blamed herself for not exercising enough. In reality Christine exercised regularly:

Christine:** "...I completed it (exercise) on the way into work on the bus and the way home because that was a kind of a time when I was sitting down and it was an ideal time really, I was on the bus for twenty five minutes, that gave me ample time to do my exercise programme..." **C: 139-142.

And added:

Christine**: "I work in a community team, so I go out on visits and if I was able to do my exercises on the bus in between doing my visits I would do." **C: 148-151.

Christine**: "... I had hot water baths to kind of try and loosen things up. And so I did try." **C: 167-168.

She also attended outpatient hand therapy sessions so she did work quite hard on her home exercise programme. She blamed herself for her perceived poor outcome as she felt she did not exercise frequently enough but she contradicted herself and it was clear that she did work very hard indeed. The perceived poor outcome may have been due to the fact that the injury was more serious than she had understood or she was unclear that the rehabilitation process would take longer than initially

thought. Although she reported that she followed the prescribed treatment plan, she reported that the injured hand had not recovered how she had hoped.

With hindsight, Sharon felt she returned to work too soon after her surgery.

***Sharon**: "I wouldn't have gone back to work so soon I think. I went back when my arm was in plaster which was probably the most stupidest thing to do because that hand was absolutely useless and strapped up and my arm in a sling."*
***Interviewer**: "Why did you go back then?"*
***Sharon**: "Because we were short staffed."*
***Intervie**wer: "So you kinda felt…"*
***Sharon**: "I had to yeah."*
***Inteviewer**: "Your work has very busy periods?"*
***Sharon**: "You're sitting back and everyone is dashing around about you and you thought you can't really. Well you couldn't do what they was doing but…"*
***Interviewer**: "So now you're thinking back, you think you wouldn't have gone back what impact would that have had on work do you think if you hadn't turned up for a couple of weeks more?"*
Sharon**: "It would have created problems I think. But I just think you know, you don't get any thought of any better for just going into work whether you do or don't. I understand now, it's not benefitted me in any way." **C: 101-104.

Although she reported that her injured hand had healed well and that she regained a full medical recovery, she regretted the fact that she returned to work due to her perceived lack of support. She had felt that she had made a sacrifice by returning to work so soon after her surgery. She now feels that she returned to work out of a sense of loyalty to her closest colleague, rather than the company as a whole:

Sharon**: "I wasn't keen to come back to work, it was a case of I had to. If my manager had been there might have been able to explain to him that I'm not coming to work, but the fact that I had no one to call and it was a case of leaving my colleague on her own, you know what I mean? She's my friend so..." **C: 139-142.

Sharon felt isolated on her return to work and misunderstood.

***Sharon**: "Because I'm a typist. All I could do was answer the phone. We sort out contract notes. We do that with a pile of paper work and we just sift through the work and I could do that one handed and that's all I could do."*
***Interviewer**: "What was that like coming into work and not doing your job?"*
Sharon:** "It's hard and frustrating really. But I thought at least if I'm in I can answer a few phone calls that's taking some weight off my colleagues." **C: 170-175.

The realities of returning to work proved to be different from what she felt it would be like. Communication with her manager proved to be not enough for the manager to understand the real needs that Sharon had on her return to work. The kind of support she was hoping for was unrealistic. She expected her boss to have:

Sharon**: "read up about it, I mean the extent of my injury. If I was a manager and I managed somebody undergoing surgery I would at least want to know what's gone on. It could have been something more life threatening...That's just me, maybe he should have known and looked into it and you know understand a bit more." **C: 136-142.

Ian felt similarly powerless to discuss his difficulties with a manager that he felt did not understand his circumstances. Now he had returned to work he found it difficult to ask for support from his manager. He felt that if he had his time again:

***Ian**: "I'd have got a doctor's note and definitely claimed the statutory. That would have helped a lot. I don't know, I wouldn't have gone back to work when I did, I would have had to sort out some other way of getting money I suppose. If I went back far enough I would never have opened the tube of glue!"*
***Interviewer**: "You wouldn't have gone back to work (when you did)?"*
***Ian**: "I'd have made it clearer I'd have put my foot down a lot. At the end of the day when you wake up, I'm used to full movement and I was waking up and I couldn't move it any further than that (half flexion), 40 degrees or something and I thought 'Jesus, shit' I thought I've really done some permanent damage so it's not worth it. I didn't get paid and the hassle I have to do I mean I could quit this job and get*

another one but I'm always going to have this finger. Why am I jeopardising it to do something that I don't..."

His sense of frustration stemmed from once he returned to work he was powerless to get the support he felt he was promised. He wondered if he had written support from the hospital explaining his current level of inability, this may have empowered him and made them allow him to truly do light duties.

5.6 Major theme three: Contemplating work

5.6.1 Subtheme one: 'expectations'

When John was injured at work, his boss took him to hospital:

***John**: "I thought this was serious I didn't know there was broken finger."*
***Interviewer:** "Yeah."*
John**: "So I thought, then the boss came out straight away and he sent me with the vehicle straight to A&E here." **A: 84-87.

Once it became clear that John's injury was too serious to allow him to work for at least six weeks, he was told by his boss that he would not get any pay while he was unable to work. John appeared to be accepting of this and was able to understand that his boss would be unable to pay him when he was away even though it would financially affect him and his family greatly:

***John**: "Cause I'm stuck with the bills, rent, everything."*
***Interviewer:** "Of course. Will you get paid when you are not working?"*
***John:** "No, because they are a small company...they are themselves suffering with their daily fees too."*
***Interviewer:** "Really?"*
John:** "If they were to pay me it would be hard for them, you know what I'm saying? Hard for them." **A: 222-226.

He had limited expectations of his boss to support him. Similarly his boss did not expect to support him financially although he did promise to keep his job open for him once he had recovered:

***John**: "The only thing they can do is that as soon as I am better I can start working with them."*
***Interviewer:** "Great"*
***John**: "This is the help they can give at least at this point." **A: 222-224**.*

The reality for John was that the work in his job needed to go on. As it was a small company his absence, although enforced, meant that a replacement was needed to ensure that they could continue to operate. They could not trade being short one person.

Christine spoke with her GP when initially thinking about returning to work:

***Christine**: "We spoke a bit about work like when are you planning to go back to work and I said really I just don't know because my job is quite hands on. Erm, I'd say about 30 to 40 per cent of my job is quite admin based, you know, writing, typing all that I would do with my right hand and then the other part is quite physical and 'hands-on' work. So he (my GP) he suggested that I take the remainder of this week off erm, he said the last thing you want to do is to go back into work use that hand more than you should do, possibly get into a situation where you don't have the opportunity to control it and you just react and maybe go and try and catch something with that hand and the last thing you want to do is kinda rupture that tendon and have to go back under the knife so I kinda agreed with him. So he signed me off for the rest of this week." **A: 297-307**.*

Although Christine was keen to return as soon as possible she was uncertain about how she would manage. Her boss was supportive about her returning to work and devised some on-going support for when she returned. Her boss did however need Christine to let her know what she would and would not need in the way of support:

Christine**: "She is aware of how much this is going to impact upon my job and is very understanding and we spoke about when I do go back to work that having a rehab assistant working alongside." **A: 316-318.

Christine's boss arranged for a team member to provide support if Christine felt it was needed, for example if any patients needed help to be transferred from a chair to a wheelchair.

Similarly, James took the lead in informing his boss about his injury. His boss was flexible and happy to allow James to set the agenda for his return to work:

James**: "They adjust according to your needs even she said as soon as you feel you can come in to help then you can come… you can go and do office work or some inside work if you can." **A: 593-599.

James had chosen to take six weeks off and then return to work. He told his boss this and she was happy for him to do this. She also added that he could have an informal phased return to work programme if this would prove useful.

Sharon telephoned her boss to let him know when she would be returning to work:

***Interviewer**: "Did you feel able to go back to work on the Monday?"*
Sharon**: "Yeah, I felt OK in myself and erm I said to my boss, you know I'll just try to do what I can. I'm more of a typist, so it was a little bit awkward so I was just trying to do things one-handed." **A: 73-76

Sharon was keen to return to work as soon as possible, it was a busy work period. She felt unsure how she would manage once back at work. She envisaged that initially she would do light duties and just what she was able to do:

Sharon:** "…it's not too bad so if I can't get involved in the keying in stuff because we sometimes have to manually book transactions. There are other things other work, processing stuff erm, through our system that we use. We use a lot of the mouse; just to click on things I was doing more of the simple tasks." **A: 87-90.

Christine did not involve her boss in this phased return to work plan. She hoped that as she was returning to work so soon after her operation it would be understood that she was not going to be able to manage her work to her previous standard for a while. In her own mind she had developed a phased return to work plan and expected others, including her boss, to understand this.

Participants were coming to terms with their injury and what it meant. At the same time they were trying to resume their pre-injury existence but in the context of the new reality of their injured state. Many participants reported that the injury would affect their ability to function but such an impact would only be minor. It was envisaged that their ability to do their job would be affected but only for a relatively short period of time.

5.6.2 Subtheme two: 'it's not how I thought it would be'

Sharon found on her return to work three days after her surgery that the reality of being back at work proved not to be as she expected. She felt upset that her boss had not made arrangements for her, perhaps by hiring a temporary replacement to provide support:

***Sharon**: "I mean I know it's not practical or whatever but it was busy when I came back and if there was no one to help out. Maybe my boss should have planned that before he went on holiday and maybe organised a temp to come in?"*
***Interviewer**: "Did he know what the impact was?"*
Sharon**: "He knew full well, yeah I had my arm in a plaster cast and I said to him you know I'm not going to be able to do much work if I return to work. Most people in my situation probably wouldn't have returned to work but I felt I had to because leaving my colleague on her... it's basically impossible to do the job on her own." **B: 85-92.

Sharon assumed that her boss would understand the implications of her injury, the implications that to her became only too real when confronted with the realities of her day-to-day job and the difficulties she was experiencing doing it. When Sharon first returned to work she found it was difficult:

Sharon: *"It's been a struggle when there was two of us, because obviously it's more like there is one and a half of us. With two people you can manage it but I'm half a person (laughs)."*
Interviewer*: "What was it like when you felt you couldn't do the job?"*
Sharon*: "First of all I felt pretty useless, a bit guilty. But erm...you know it's just one of them things. It's not anyone's fault it's just an accident that's happened that's unfortunate."* ***B:175-178****.*

The fact that her colleague and friend would be short-handed influenced Sharon's decision to return to work so soon after her surgery and potentially put her own recovery at risk. She soon realised that her perceptions of how being at work would be and the realities of being at work, were markedly different. Once back, she wondered if her colleagues fully understood the impact of such an injury on her hand although she herself was reluctant to tell them and ask for help:

Sharon: *"It would have been nice if they actually spoke to me but they didn't. So I think people just think you're back at work and you're capable of getting on with the job. You get 'how's your hand?' You don't 'Oh is there anything I can do?' Or 'If you are unable to do this then I can do it.'"* ***B:96-101***

Sharon found that the only support she received was from her immediate colleague in her team who went out of her way to be supportive.

John was interviewed for the second time eleven weeks after his injury. He had still not returned to work and he was beginning to wonder if he ever would. He was now unsure if he ever will return to his old job:

John*: "It's because of the hand, because at the end of the day it's still heavy lifting and if I have to go along with this it's really tough for people and their job, that is really the reason I am thinking of finding something else."*
Interviewer*: "OK".*
John*: "At the end of the day, if I go back there they won't be providing me with assistance, you know what I'm saying so it is going to be difficult."*

***Interviewer**: "So you are either at work or you're not? There's no half way measures?"*
***John**: "No, no, no. Definitely if there is something light job there… Yeah." **B: 135-146**.*

It was nearly three months since his injury and although his hand was recovering he did not yet feel confident about using it and felt that he would be unable to do his old job. He now felt that he would have to look for another job entirely:

***John**: "I can bend them now but I can't hold a small bottle of something to open the lid up. I wasn't able to open it…it was really hard 'cause I can't give me enough pressure to hold it to turn there, for when I use this hand it turns it's very hard, I put it between my leg…it's really hard, still finding difficulty with some things."*
***Interviewer**: "What other things are you finding hard to do?"*
John**: "Like lots of things, holding, even the holding of the tooth brush it's difficult, I don't know 'cause I'm finding difficult 'cause I if I hold it with these two fingers (index, finger) I hold it here it gets pressure and it hurts a little bit as well. Big things it's alright I can hold it because I got the…(span grip) you know what I'm saying but something small it's difficult." **B: 79-103.

He was confronted with the reality that his hand had not yet fully recovered and he was unsure if it ever would recover. He did not feel confident about his ability to do his job safely. As a result he concluded that he would need to start looking elsewhere for a job that he felt he could manage. His boss still claimed that John could have his old job back but the replacement he employed while John was away would have to be let go in order for this to happen.

Christine went back to work after two weeks and had devised a return to work plan with her line-manager. Once back:

***Christine**: "…everyone's been very supportive at work I had rehab assistants making themselves available if I needed…"*
***Interviewer:** "How did that turn out? When I last spoke to you said that was offered?"*

***Christine**: "That was offered. Yeah I mean obviously they have busy diaries themselves so they, it's been said by my manager that they should make themselves available but at the same time if they already have things in their diary I don't think they've been told to prioritize me as someone to assist, but we've been able to work around it."*

***Interviewer:** "How have you been able to work around that, give me an example?"*

***Christine:** "Erm, the thing is with the service I work in you know we're not kinda, it's not set in stone how frequently we have to provide input to our clients like no regular dates and times so it's a flexible team so we just kinda worked with that. Yeah, so that's been fine." **B: 8-20**.*

The return to work plan had not been used as it was planned but all her colleagues were made aware that she was working below par and may need assistance from time to time. This planning seemed to have made Christine happy to return to work while her hand was still not yet fully recovered and she felt empowered to ask for assistance from her colleagues when it was required.

5.6.3 Subtheme three: 'acceptance of the work-life'

Ian returned to work and his hand injury had resolved enough to allow him to work at his pre-injury level. He felt that if he had his time again he would have formalised the return to work plan by getting a doctor's note to explain the injury in detail to his manager. In addition he would have claimed sickness benefit:

***Interviewer:** "If you had your time over again since your injury what would you have done differently?"*

***Ian:** "I'd have got a doctor's note and definitely claimed the statutory. That would have helped a lot. I don't know, I wouldn't have gone back to work when I did, I would have had to sort out some other way of getting money I suppose...Even if it's subconscious, people don't quite believe the word of the worker so if I had some sort of ..."*

***Interviewer**: "Formalised…?"*

Ian: *"Piece of bullshit with the message on it. 'There you go, deal with that'. That way what can you do? That would have helped a lot, especially with a bit of paper because I swear they thought I was milking the time off. I swear, because I mean, they never say anything you just get a feeling. Like, 'He doesn't need three weeks off he'll be alright.'"* ***C: 109-116.***

Ian felt that once he returned to work, there was a difference between how he imagined his return to work experience would be and the actuality of his experiences. He soon realised that his injury was having a greater impact than he expected. Additionally the support he received from his colleagues was sporadic and the needs of the work place superseded his needs.

Sharon also wondered if it was a good idea to return to work when she did:

Sharon*: "But I just think you know, you don't get any, thought of any better for just going into work whether you do or don't. I understand now, it's not benefitted me in any way. It would have helped the company a little bit more but you don't get rewarded for it so."* ***C: 104-108.***

She felt that one of the reasons she returned to work when she did was to help out her colleagues who were under pressure at the time and were short staffed. Even though she had returned to work and her hand injury had resolved and she could now work at her pre-injury level she was still upset with her boss for allowing her to return to work when she did:

Sharon: *"He should have covered my position but the fact that he didn't put me under pressure to go back to work."* ***C:123 -124****.*

Sharon felt that her boss should have been more understanding. She was annoyed with her boss but also annoyed with the team from the hospital for not making her take time off work:

Sharon*: "Actually if he had turned around to me and said, 'Actually we don't expect you to be into work after having your operation', nothing you get nothing like that."*

Interviewer: *"Do you think that is a common thing that happens when people are off? That they don't understand?"*

Sharon: *"He doesn't understand yeah, maybe it's the hospitals, I could have been signed off but maybe they should have just done that. They knew about my job and they asked me about my work but maybe they should have said, 'I believe you are doing an office job blah, blah, blah. I will sign her off because she shouldn't be in that environment'. But it was basically. 'Do you want to be signed off? If you do we will sign you off, if you don't then we won't.' It should be like maybe mandatory."* ***C: 152-165****.*

Sharon felt powerless when she initially went back to work and felt she could not ask for assistance. The level of dissatisfaction had escalated but the roots of this dissatisfaction perhaps could be traced back to the initial communication she made with her boss. Sharon thought she would be able to manage when she returned to work and thought that others would help her out. The fact that others did not made her feel isolated, misunderstood and taken for granted.

John had been replaced at work. He reported that his boss had kept a minimal level of contact with him while he was recovering. John did not seem to expect more than that. He had been told by his boss that when he felt able to return to work he would have to let his replacement go:

John: *"Yes they did, they always contacted me and ask how I'm doing. What more can they do, you know what I'm saying? They can't come and fix it for you. They came and ask me what's happening and how I'm doing so...everybody...that's OK."* ***C: 167-171****.*

John never went into work to discuss a date to return to work. John felt the onus was on his boss to ask him to come back to work. John knew that if he went back to his job, his replacement would be made redundant:

John*: "That's right. I've never been there. I spoke to them. I've never spoken about coming back. If they want me then I am available. But if they don't ask me there's no point. I don't go and push someone else. You know what I'm saying?"* ***C: 187-191.***

John reported that his boss was interested and concerned about his ability to get back to work, but reported that he put the needs of his workplace first. This was realistic, because the company was small and being short one man for an extended period of time would have risked the company not being able to operate at all.

John's hand was now more functional and he was able to do most day-to-day tasks. It was as if the extended period of time off work had given him time to re-evaluate his work and the kind of work he would have liked to be doing. The enforced break following his injury seemed to have given him this time. He now planned to start a car mechanic course at a local college:

***Interviewer**: "It seems to me, tell me, that if you didn't get injured you would still have that job now?"*
John**: "Yeah. I'd have stayed there I wouldn't have done anything else. But because of this I was free to search for this and that to find. So I had time. So now I found something and I'm going to do this. So I go from there."* ***C: 101-106.

He rationalised this choice to himself:

***John**: "It was a very stressful job. It was like...you take all the responsibility you take the delivery there. People don't pay. You have to drive and take the goods you know what I'm saying? It's all up to you. People in some shops you go are really terrible. They take your stuff but they don't wanna pay you. You end up starting a fight. So I don't wanna get involved in this anymore. I've had enough."* ***C: 93-100**.*

John had made a journey from expecting to return to work after about six weeks to leaving his job and going to retrain in a new career. John felt he had to be self-sufficient. He felt he did not get much practical help from his boss or the benefits office:

***John**: "All they asked me was my details and asked for a sick note."* ***C: 118-119**.*

He therefore felt he had to work out what would be best for him. He viewed the role of the occupational therapist as focussing upon the repairing structure and did not see it as their responsibility to help plan his return to work:

Interviewer: *"Was there any information you were told from here that was useful in using the hand about going back to work or…"*
John*: "No it was just helping my hand...the therapy thing, the exercises… But they don't be responsible for getting me back to work they are here to fix you."* ***C: 145-149***.

Christine devised a return to work plan with her supervisor:

Interviewer*: "It sounded like a good plan from your colleagues to give you help and support (on your return to work) you even had your own minion given to you. Did that work out…?"*
Christine*: "That was what I was told when I was still off work after the surgery and phoning up my boss and arranging when I'd return to work and what I'd be able to do and what I would need maybe support with. It was said that if I needed an assistant to come out on visits with me to write up notes things that they, that I could access one of the assistants. But in a way it hasn't really been needed there has been a few…I think when I first came back there were a few times when I'd make a quick phone and I'd just need to write two or three things and I couldn't really do that at the time when my hand was in the splint and I was told to minimally use the rest of my hand and I'd kind of grab a colleague here and there just to write up some lines. Apart from that I was just getting on with things."* ***C: 65-78.***

The fact that Christine had made the return to work plan prior to her return seemed to be enough for her. Her supervisor and immediate colleagues were all aware that she would be returning to work but would not yet be fully functional.

5.7 Summary

Many participants reported that they expected that the hand injury would impact on their ability to function for a few months. Many, except Martin, expected that it would not take quite so long to be able to use the hand functionally. Most of those who had sustained injuries that clearly needed medical attention did not expect that the healing process would be longer than a few months and an expectation of a full recovery was voiced. Participants used previous experiences of hand injuries to base these opinions on and most expected that they would need minor medical interventions before being discharged and able to get on with their day-to-day activities. The implications of such an injury were unclear and many were surprised to be told that they would need surgery and then need to participate in an in-depth and time consuming rehabilitation programme. It was at this time that the reality of the injury started to become clearer. Participants did not feel unwell in any way and were inclined to get on with their daily activities as well as they could while managing their hand injury at the same time. It was expected that the injury would prove a minor inconvenience for one to two months but then their usual ability and participation in activities would resume. The injury had an impact upon their usual roles and support was needed from family and friends.

Many found it difficult to justify taking time off work. Colleagues, friends and family often did not expect them to take much time off work. Even participants themselves often reported that they found it difficult to accept that their injury would affect their ability to get back to work for long. Other factors helped individuals decide to get back to work: fear of losing their job, boredom and wanting to help colleagues were among some of the factors that helped them make the decision to return to work within weeks of sustaining the injury.

As time passed it became clear to many participants that the hand injury was not healing as anticipated. Worries that perhaps the healing hand would not actually fully return to its pre-injury level of function began to appear. Concerns were raised about whether the hand would improve at all. An attempt to understand the meaning of the perceived delay in their healing process took place and an understanding that perhaps the hand would not make a complete recovery began to be voiced. The expected outcome of short term inconvenience then a return to pre-injury function was replaced with a sense of uncertainty. Feelings of loyalty to the job were lessened. Uncertainty about their rehabilitation programme appeared. It

was difficult for some participants to understand why they were not supported by their colleagues as well as they had hoped. This resulted in a sense that perhaps they were wrong to return to work when they had and should have waited longer for the injury to fully heal. It was reported that the treating occupational therapists provided a sense of perspective for many participants and assisted in the medical management of the injury. Some participants did not expect the occupational therapists to become involved in the return to work process but to focus upon the healing structure and provide information to help participants manage and make sense of the injury while it was healing.

If the injury did not take place at work, participants made contact with their line manager to let them know that they had injured their hand. If the injury had happened at work, the participants discussed the perceived implications of the medical intervention with their line manager. There was an understanding by the participants and the manager that the injury would necessitate a change in work duties, but it was expected that such modifications would only be needed in the very short term. Participants also expected that managers and colleagues would provide support during the initial period once back at work.

Once back at work, it was more difficult for participants to work to their pre-injury ability. Everything took longer to do and it was difficult for them to work to their usual standards. The injured hand was interfering more than anticipated and asking for help proved difficult. Many participants felt guilty about not being able to work to their expected standard and having to rely on colleagues, and for not having time to focus on their exercise programme. Doubts began to emerge about whether it was a good idea to have returned to work at all when they had.

Feelings of guilt about the hand were expressed and participants wondered if they had focussed more on the rehabilitation perhaps their hand movement would have been better. Participants were able to use their hand, not always in the way they had been able to before, but they were able to do most activities with their ‘new’ hand. The use that they had obtained was continually being tested and a sense of the new hand was forming. Expectations began to shift and an understanding grew that the hand may be good enough to be able to manage most activities.

Participants reported that they did not realise that the rehabilitation would take up to six months or more. They added that this would have been overwhelming if they

knew this from the time they were first injured. Reviewing participants from the time of their injury to being back in work (or making different employment choices) provided an opportunity to gain insights into the meanings and attitudes as they unfolded over time. The next chapter will discuss the significance of these finding in relation to the literature.

Chapter 6: Discussion of stage one of the study

6.1 Introduction

This chapter discusses the findings from chapter five in relation to current literature regarding how an individual manages to return to work following a traumatic hand injury. There were three main themes and each had three subthemes: The first theme was 'the physical journey' with three subthemes: 'naivety', 'reality bites' and 'the new hand' The second theme was 'the emotional journey' with three subthemes: 'it's only a finger', 'competing priorities' and 'regrets'. The third theme was 'contemplating work' with three subthemes: 'expectations', it's not how I thought it would be' and 'acceptance of the work-life'. The use of reflective lifeworld research (Dahlberg *et al*, 2008) to examine this phenomenon has provided an opportunity for three major themes and nine subthemes to emerge. Each major theme will be examined individually: the 'physical journey', the 'emotional journey' and 'returning to work'. The adaptive processes that participants experienced will be discussed in relation to their return to work experiences. The role occupational therapists can play in the return to work process to contain and manage expectations of managers and participants are also discussed. The final section of the chapter will examine the development of a return to work intervention that has emerged from the literature and the findings for this study.

6.2 The physical journey

This theme described the physical ramifications of sustaining a hand injury. Subthemes reflected participants' change in perspective over time. The first subtheme, naivety, described the difficulty that many participants had in understanding the meaning of what impact the injury would have on their ability to function. The second theme, 'reality bites' highlighted the time when many partcipants began to finally realise the implications of having such an injury. The third subtheme, 'the new hand' described an understanding reported by many participants that their injured hand was never going to be as it was prior to their injury but that they are still able to manage almost all their usual daily tasks.

The need to engage in, and adhere to, post-operative rehabilitation programmes to ensure that the surgical repair is maintained and returned to a functional level close to that prior to the injury is often cited as the primary goal of surgical and

rehabilitation interventions for individuals who have sustained a traumatic hand injury (e.g. Barabas, 2013). To date efforts have focused on improving patients' ability to engage in these programmes by improving patients' understanding of both the healing process and the need to exercise regularly (Evans, 2012). Findings from this study have examined in detail individuals' experiences during the rehabilitation phase (from the point of their injury to up to six months following such an injury). The need to participate in a post-operative exercise programme was acknowledged by many of the participants. Whilst it may not be clear if such descriptions meant that participants understood the information given to them, the fact that they explained how to do the programme would suggest that they understood this information on a cognitive level even if later actions might suggest otherwise. An example of this can be seen in the study by Dean *et al* (2005) that examined how individuals with chronic back pain were able to adhere to their exercise programme. Assumptions had been made by the physiotherapy team that by helping individuals understand the cause of their pain, the anatomy, the healing time and the reasoning behind the need to exercise regularly, would help these individuals to engage with their exercise programme more fully. Medina-Mirapeix *et al* (2009) found that participants only complied with their exercise programme when symptoms of pain were present. Participants in that study commented that they wanted the physiotherapy team to manage their pain as this would have enabled them to get on with their usual day-to-day activities. The fact that knowing patients understand the prescribed exercise programme does not mean they participate in it.

The concept of participants needing to understand their treatment programme in order to adhere to such a programme may need to be examined from a different perspective. Skov *et al* (1999) discussed barriers that hand injured participants experienced but concluded that if surgical techniques and patient compliance could improve then outcomes would improve. Steward (2004) highlighted the need to focus upon the perspectives of hand injured patients and gain a deeper understanding of their needs in order to provide them with an opportunity to enable them to manage their rehabilitation programme while engaging in their day-to-day lives. In the first stage of this study, participants reported feelings of guilt for not complying with their exercise programme. It is argued here that there is a need for participants to gain insights into the healing mechanisms and rehabilitation regimes following a traumatic hand injury but it is also relevant for hand therapists to understand the implications of the injury from the patient's perspective. This could entail an understanding about what such an injury may mean to a hand injured

patient and to devise a means of translating such understandings into an ability for patients to engage with their day-to-day activities and to incorporate their exercise programme within the activities of their lives.

In this study, participants were able to describe the need to do their exercise programme and could demonstrate the ability to do them when asked but such understandings were not always translated into an ability to do the exercises as fully or as frequently as had been requested by the hand therapists. Other factors may have influenced this ability, as can be seen when most participants opted to return to work around two weeks following their injury. Most participants made the assumption that it would be possible to engage in their exercise programme after returning to work. For most participants this turned out to be more difficult than anticipated. One of the participants, Ian, once back at work found himself confronted with the dilemma of having to look after his surgical hand repair but also felt obliged to help his colleagues lift a heavy water tank. He did not want to let them down nor damage his recovering surgical hand repair. He worried that he was not exercising as regularly as he felt he should be. In addition, he felt that because of his injury he was not able to fully engage in his work tasks. It was not anticipated that being back at work might cause such a dilemma. The choices made by participants reflected the adaptive processes that were made throughout the recovery period. The choices made reflected those described by Livneh and Antonak (1997) who argued that in response to sustaining a disability or acute injury, individuals would move through the stages of shock and denial, feelings of depression, internalised anger and externalised hostility before feelings of acknowledgement and adjustment (section 2.5). Participants often found it difficult to understand the significance of the injury and how it might influence their day-to-day functioning. Perceived lack of empathy or support from colleagues and managers was commonly reported. Finally, participants often reported a sense of acceptance of their ‘new’ hand even if the hand had not become fully functionally restored. This adaptation model (section 2.5), though useful in gaining insights into the process of adaptation, did not provide insights regarding the motivations of participants and how their decision making processes played a part in choices being made (Kendal and Buys, 1998). The longitudinal component of this study provided an opportunity to examine how such decisions influenced the adaptive processes of participants. Schkade and Schultz (1992) argued for the need to focus rehabilitation interventions on *how* an individual naturally adapts to their circumstances as opposed to examining methods imposed by health professionals which are assumed to help individuals adapt. Occupational

adaptation is viewed by Schkade and Schultz (1992) as a response to occupational challenges that present themselves to an individual. This study examined the adaptive processes of the participants longitudinally and examined how they were able to respond to challenges encountered following hand injury. Townsend and Polatajko (2013) also highlighted the importance of using insights into the adaptive processes of individuals to provide an opportunity to enable them to overcome any difficulties engaging in day-to-day occupations. Such insights, as described by Townsend and Polatajko (2013), could be used to underpin the provision of rehabilitation interventions for this patient group and could afford an opportunity to include the adaptive processes in such interventions.

In contrast, another of the participants, Martin opted not to return to work until his damaged tendon was fully healed which took twelve weeks in all. He was supported in this by his family and workplace. It is possible that decisions concerning the ability to adhere to rehabilitation programmes are linked to the roles and responsibilities that individuals are confronted with. Advice was given not to return to work until the repairing structure had fully healed by the hand therapists. Participants who opted to return to work before the repairing hand had fully healed, did so against the hand therapists' advice. In this study participants had to devise their own means of integrating their exercise programme with their usual work activities.

Most participants opted to return to work around two weeks following their injury and factors cited as to why they chose to make an early return included fear of losing their job, financial pressures, boredom, wanting to help busy colleagues, being under pressure to complete their own work or having difficulty in appreciating the reality of the impact that such an injury would have on them. This was in contrast to Martin who opted to stay off work for twelve weeks following his surgery. For most, the need to participate in an exercise programme was not the sole concern in their lives but just one aspect of many life roles that needed to be attended to whilst the healing process progressed. Hand therapy protocols of care advocate the need to participate in an intrusive and time consuming exercise programme for at least twelve weeks following surgery (Peck *et al*, 2014). These types of protocol focus on the exercise programme alone (Appendix 5) and do not describe how an individual is expected to participate in such an exercise programme while getting on with their lives at the same time. There is an expectation that hand injured individuals will not return to work until the healing structure has fully recovered. This study has

demonstrated that individuals do in fact return to work, often only a week or two after their surgery.

6.2.1 Maintaining control of the rehabilitation programme

Participants did not have a sense of control over their ability to incorporate their exercise programme into their daily activities. For example, Ian was aware of the need to participate in his exercise programme and planned to maintain this after he returned to work. He had opted to return to work while his tendon was not yet fully healed. He felt that his manager and colleagues would understand the fact that he was injured and that he would need to be allowed to function below the usually expected level required of the job for the time it would take for the repaired structure to heal. He reported that his manager's expectations of him to do his work had to take precedence over his ability to manage his hand injury. Ian felt obliged to put work needs before his rehabilitation needs and felt that his injury did not warrant taking time off. Ian was caught in a trap; despite the injury he needed to be at work yet whilst at work he did not feel that he had the permission to function at a reduced capacity. This perceived lack of control at work meant that he did not protect his repairing hand as he had been advised to do by his hand therapist. In addition he found that he was prepared to risk the surgical repair. Martin's experience was different. In contrast to Ian, Martin had arranged with his manager that he would not return to work for twelve weeks following his injury and his family were in a position to help him with his day-to-day activities at home while he focussed upon his exercise programme. He reported that he felt he was in control of his rehabilitation programme and was able to prioritise this. The way in which Martin opted to manage his rehabilitation programme might be viewed as the ideal from a hand therapist's perspective but Ian's experiences may be viewed as the more usual one. An occupational therapy perspective might have proved more useful for Ian as it could have provided an opportunity to take into account his own specific needs and priorities and incorporated these into his treatment. Polatajko *et al* (2007) describe in the CMOP –E (section 1.4) the need to take into account environmental, personal and occupational factors when devising rehabilitation interventions for an individual. Hand therapy interventions tend to concentrate on the healing of the repaired structure and do not formally include individuals' concerns.

In this study, the longitudinal nature of the interview process highlighted the changing experiences and perceptions of the participants. When they were first injured, participants appeared naïve about the impact that the injury would have on them. When describing their experience they focused on their injury, often blaming themselves for the accident. Their expectations were that everything would eventually be all right, and that the impact would be only short term and minor. By the second interview a shift was discernible; participants began to describe their experiences in relation to their social context. Rather than focusing on the physiological concerns in relation to the healing structure, as time progressed their concerns shifted towards the impact of the social context in which they found themselves. The injury could no longer be considered in isolation, it was part of their interaction with the wider world. Their lives up to this point had been lived within the context of a two-handed person in an able-bodied world; they were now trying to negotiate their way through this same world but with an injured hand. Participants in this study were encountering unanticipated obstacles whilst simultaneously holding an expectation that others would understand the difficulties that they were experiencing. Decisions being made about their ability to engage in their daily lives were now not solely determined by the rehabilitation programme, but contextual factors such as maintaining a parenting role or sustaining stable employment had to be taken into account.

Participants had varying degrees of control and power in relation to their social context. Some participants once back at work experienced little control over their roles and duties due to the inherent and existing power structures within their work context. When Sharon first returned to work she expected that her manager and colleagues would understand the significance of her injury and make allowances for this but she discovered that the priority of her department was the work that needed to be done and she felt that her needs were diminished as a result. Occupational therapists may be able to help bridge the gap in the power differential between the patient and their manager by providing an intervention which would enable participants to incorporate both the exercise programme and work concerns when back at work (Steward, 2004). This could be an opportunity for occupational therapists to provide an occupational focus to their hand therapy input by examining how the hand injury affects a person's ability at work (Townsend and Polatajko, 2013). Occupational therapists could achieve this by formally participating in the return to work process. The participant is making informed decisions by taking into account the hand injury in the context of their lives, and their assessment of their

priorities may currently differ from the hand therapists who might be unaware of these contextual factors. Such contextual factors could be integrated into hand therapy assessment and rehabilitation programmes by expanding rehabilitation interventions to include an occupational therapy perspective. The occupational therapy process (Reed and Sanderson, 1999; Townsend and Polatajko, 2013) cites the need for occupational therapists to do just that and include patient concerns when developing occupational therapy interventions. The College of Occupational Therapists (2010) concurs with this and describes the need for occupational therapists to incorporate occupational performance needs for patient groups in the development of occupational therapy interventions. Fitzpatrick and Presnell (2004) add that this needs to be done for hand injured patients as, although the injury sustained by different individuals may be the same, the impact upon their lives may be different. It must be noted that currently the role of occupational therapists engaged in hand therapy is constrained by the medical context of their work in an acute medical setting where the focus is largely upon medical concerns (Alsop, 2004)

Many participants were confronted by a power differential between themselves and their manager but it also needs to be considered that there can be a differential in power between participant and hand therapist as well (Maitre and Erway, 2006; Hammell, 2013). Hand therapists focus upon the repairing structure and the guilt that was reported by the participants about their inability to progress as anticipated may have been compounded by the hand therapists themselves. The hand therapists' primary concern is the maintenance of the repaired structure and the assumption is made that if it heals well function will resume. It is interesting that some participants felt guilty because they felt that they were not progressing as they had anticipated. The sense of frustration was aimed at themselves and there was no sense of blame directed at the treating hand therapists who were managing and directing the treatment programme. If occupational therapy principles as described in the Canadian Model of Occupational Performance and Engagement (Polatajko *et al*, 2007) were used to include the individuals' concerns (section 1.4) a more holistic approach could be devised for this patient group.

Hammell (2013), in an article that examined the need to use a client-centred approach when devising occupational therapy interventions, argued the need for occupational therapists to "*renew their focus on respect – respect for clients; respect for clients' strengths, experience, and knowledge; respect for clients' moral right to*

make choices concerning their lives – and on fostering respectful, supportive relationships with clients" (Hammell, 2013, p.178). By including such perspectives it may be possible to allow for the development of a rehabilitation programme that encompasses contextual factors of participants' lives.

It was common that participants were left to interpret how to incorporate the exercise instructions they had been given into their day-to-day activities. Even when the repaired structure had sufficiently healed so that the splint wearing regime could be reduced, participants were told that they were still not allowed to normally use the hand for several more weeks as the repairing structure was not yet fully healed. Phrases used to describe this included one by Christine. She stated that "*when I asked what minimal use was they said brushing my teeth very lightly*". Such advice appeared to be focussed more upon the need for participants to not risk harming the injury rather than assisting them to function more independently. It appeared from the findings that participants had to attempt to make sense of such instructions unaided and had to rely upon their own judgement to try and combine daily needs with rehabilitation ones.

Perhaps there is a need to create a shift in the relationship between the occupational therapist and the hand injured patient. A relationship that Hammell (2013) argues ought to move away from the power relationship where the occupational therapist is viewed as an expert who sets the treatment goals, to one where the focus of the intervention includes, and is led by, the needs of the patient. Hammell (2013) went on to state that to be truly client-centred occupational therapists should understand patients in the context of their lives and understanding should be gained of family, friends, colleagues and responsibilities. Occupational therapists could help hand injured patients by examining how an individual might be enabled to return to work while managing their exercise programme at the same time. This could be done by helping them to structure their working day in a way to enable them to do this. It may be unrealistic to fully include patients' needs to such a complete degree but the rehabilitation intervention offered could focus upon giving advice on how the patient can manage both their treatment programme and work needs. It is possible that occupational therapists working with hand injured patients can manage, review and re-evaluate progress when patients attend for follow-up outpatient appointments (Townsend and Polatajko, 2013).

6.2.2 Coming to terms with setbacks and re-evaluating expectations

Many participants held an expectation that there would be some disruption in their ability to engage in their day-to-day activities but their expectation was that such disruption would only be short term. Participants reported that they understood their exercise programme as explained by their hand therapists, but considered it to be only one component of information that was relevant to the decision-making processes in their lives at that time. These other components included the need to focus on the realities of their lives, such as child care, personal care, day-to-day living, and working. Many participants did not see the exercise programme as something that occurred in a vacuum; instead it was part of a complex myriad of choices that they faced at the time. The concern was raised as to how the exercise programme could be adhered to while they attempted to participate in their usual activities of daily living. Steward, (2004) argued for the need to include such patient concerns when developing interventions for these hand injured individuals, arguing that this may increase the potential for patients to integrate such a programme into their everyday lives. It may be that only giving patients a part of the necessary information (the exercise programme) to inform their decision making process may leave them having to try to incorporate their exercise programme into their lives in isolation.

As seen from the findings of this study, participants generally expected that their hand would recover in six to eight weeks. This is the amount of time a fractured bone, injured tendon or nerve takes to repair enough to cope with resistive activity (Elliot and Giesen, 2013). Participants were told this by both their surgeon and hand therapists and they interpreted this as meaning that, once this time had passed, they would be able to return to their premorbid level of function. This information relating to the physiological healing process was not sufficient to help the participants to plan their ability to engage in their day-to-day activities, such as work. It is understandable that participants drew such conclusions as they sought to gain an understanding about their injury.

For treatment protocols to be fit for purpose there is a need to include in them the realities of patients' lives, otherwise patients are not provided with the information that they need to make an informed decision about how to engage in day-to-day activities while exercising regularly. The timescale for hand therapy does not take

into account patients' day-to-day needs. It must be emphasised that patients are the experts of their lives (Sumsion, 2000) and by providing them with the appropriate level of information at the right time, a collaboration of expertise is possible for a truly integrated approach to intervention. There is a need to assist individuals to engage in their hand therapy programme in a way that allows them to carry out their usual day-to-day activity. In addition hand therapy programmes and protocols will need to change to ensure that such concerns are taken into account. Occupational therapists working as hand therapists could go beyond their medically based hand therapy role to include patient concerns in the development of occupation-focussed interventions. The provision of rehabilitation interventions for hand injuries may need to be expanded to include such perspectives in the future.

Participants were surprised that they were still not able to use the hand at around six weeks following their injury. Milestones such as having a splint removed or pins extracted did not appear to be accompanied by any significant improvement in functional ability. Participants were beginning to test out the functional ability of their hand and were realising that the hand may not recover as fully as they had hoped. Grob *et al* (2008) viewed this as the beginning of the adaptation phase, a balance between perceived limits and possibilities. Struggling to gain a sense of how their hand might now recover, participants started to doubt themselves about whether they had done enough exercise, or whether or not they had done it correctly. The reality was that most of the participants were exercising at, or above, the amount of time that was asked of them by their hand therapist (Appendix 5). It is argued here it may have been useful for participants to have been given guidance on when to exercise whilst at work and how to incorporate their exercise programme into their working regime. Participants were attempting to do their exercise whilst at work and often reported difficulties in doing both well. Often the exercise programme was neglected in favour of any pressing work needs and some participants reported feeling conflict between being able to participate in both to a satisfactory standard. Perhaps if the occupational therapist devised a return to work plan that made the need to exercise an overt and obvious part of the plan it may prove easier for the participant to feel able to do both. It is a reality that, although the repaired structure (tendon, bone and/or nerve) is strong enough to cope with resistive activities at six to eight weeks swelling and stiffness may last much longer (Fitzpatrick, 2007). Although it is likely that their hand therapist would have informed them of the healing process, it is possible that the participants were told at a time that the information meant little to them as they had not got a context for the perceived delay. This was

seen in this study where participants found it difficult to gain a sense of what this perceived delay in their rehabilitation programme meant and many concluded that their hand would remain swollen, painful and stiff with many making decisions concerning their employment based on this understanding.

Focusing on including patients' concerns into a rehabilitation programme from their first appointment, may enable patients to gain a broader perspective about what impact their injury may have on their ability to engage in their usual daily activities. It was found in the study that due to a lack of such an understanding, decisions were made by the participants concerning their perceived ability to get back into work that proved to be unrealistic. It was only when participants had returned to work that it became clear that being at work with an injured hand proved more difficult than initially anticipated. This often resulted in a time of crisis for the participants and some reported difficulties with their manager and work colleagues. At this point, many participants reported that they began to realise that perhaps their hand may not heal as they had anticipated. This realisation may be inevitable and represents a point of transition between the point of being 'naïve' and an acceptance of 'the new hand'. Occupational therapists working with hand-injured patients are well placed to enable individuals to participate in their daily lives through a process of collaboration (Townsend and Polatajko, 2013) and to offer a perspective or an over view concerning such potential difficulties and help them to gain a broader perspective about the realities of managing an injury while being back at work. Sumsion (2000) described the need to include patients in treatment planning but this could potentially be taken a step further if the occupational therapist is able to offer containment and reassurance of the patients' anxieties and uncertainties by helping them to consider the possible difficulties that they may need to consider. This can be seen in this study when some participants first realised that their hand injury was not going to recover as they had initially expected it would and they had to begin to gain a sense of what their new reality might be. Occupational therapists could anticipate this potential point of change and help them to manage that point in their rehabilitation programme.

When interviewed at around four to six months following their injury, a sense of acceptance of their 'new hand' began to emerge from the participants. In some cases the injured part of the hand was not working as well as they might have hoped due to factors such as residual stiffness or limited range of movement. There was disappointment but there was also a sense that they could use the hand functionally,

accompanied by an emerging sense of acceptance at the outcome of the 'new hand'. This is an example about how participants adapted both physically and emotionally to their new circumstances. Participants reported that with respect to function there was very little they were not able to do. This is a shift from their perspective at the point of injury when there was an expectation that their hand would make a full recovery.

Occupational therapists need to be aware of the adaptation process to understand that patients may be coming to terms with the new realities of their hand injury over time (Gustafsson *et al* 2002; Gustafsson and Ahlstrom, 2004; Strong, 2005; Grob *et al* 2008). Schier and Chan (2007) and Strong (2005) discussed the need to be aware of the adaptive processes that individuals experience on their journey to acceptance. The findings that emerged from this study demonstrated not only that participants adapted over time, but also how their adaptation process unfolded. By being aware that patients may inevitably pass through these points ('naivety', 'reality bites', the 'new hand') therapists can be afforded an opportunity to test these insights further and they could be used as a means to structure rehabilitation interventions around these themes. If it can be assumed that individuals initially will be 'naïve' about the impact of their injury on their day-to-day lives (Schier and Chan, 2007; Strong, 2005) this may provide a framework for discussion in treatment sessions to help them to adjust expectations about their rehabilitation journey. This point was made when participants were asked at their final interview, about four to six months following the injury, if they would have liked to have been told that their rehabilitation journey would take as long as it did. Many participants expected the healing process to take about six to eight weeks. They were unaware that residual stiffness and weakness can take up to six months to fully resolve. The fact that it may have taken this amount of time was reported to be difficult to take on board when first injured and it was made clear by the participants that they would not have wanted to be told the actual length of time the rehabilitation phase would take before being able to continue with their usual activity of daily living. Occupational therapists could anticipate the point that their patients had reached on their journey to the '*new hand*' and help manage expectations regarding the healing process as their outpatient appointments progress. Information about the healing process could be discussed with patients as their rehabilitation process progressed.

6.3 The Emotional Journey

This major theme described the emotional ramifications that the injury might have had. Subthemes reflected participants' change in perspective over time. The first subtheme, 'it's only a finger' described the difficulty individuals had in understanding how an injury that they perceived as insignificant was having such an impact on them. They often worried what friends, family and colleagues might think about their injury. The second subtheme, 'competing priorities' described how participants reported difficulties in getting on with their usual daily activities as well as managing their rehabilitation programme. The third subtheme, 'regrets' reflected findings that participants often reported feeling unsettled by their perceived lack of support once back at work plus feelings of guilt for not being able to perform to their expected standards at work nor engage fully with their rehabilitation programme.

A consequence for participants in this study appeared to be the quandary of how best to make sense of their hand injury. Whilst participants were aware that their hand was injured, they were simultaneously examining ways that would allow them to continue with their usual day-to-day activities.

Many participants were reluctant to accept that their injured hand would mean that they would need to take time off from their usual day-to-day activities in any way. Participants gave different weighting to different sources of information or perceived pressure. They reported experiencing pressure from family and friends who wondered why they intended to take time off work for something that was 'only a finger'. The participants themselves found it difficult to understand that their injury would have as great an impact as it did. They drew on previous experiences of what they considered to be similar injuries and made assumptions about the impact based on this previous experience. Participants were focused on maintaining, as closely as possible, their usual life activities, as a way of maintaining a sense of control and continuity in their lives and thereby providing reassurance (at a time of great uncertainty) that life would continue 'as normal'. Such a focus on the need to maintain their pre morbid level of activity was not solely based upon information given by health and rehabilitative services. The participants reported that they considered their injury to be trivial even though many had undergone complex surgery. This perspective was perhaps compounded by the attitude of others who, it was reported, also found it difficult to understand the significance of their injury. This

possibly made it difficult for participants to allow themselves to adopt a role that would have permitted them to take time off work. The injuries and subsequent surgery that many of the participants experienced were complex and serious in nature yet still participants found it difficult to prioritise the need to focus on the rehabilitation programme their injury required.

When an individual's ability to participate in their usual occupations is interrupted the effects can be detrimental and far reaching. Following a traumatic hand injury, hand therapists encourage individuals to adopt the patient role by primarily encouraging them to focus on their exercise programme. In this study, most participants attempted to engage in their exercise programme and their daily activities but found this difficult to achieve. Taking this into consideration, it could become the role of occupational therapists working in hand therapy to assist hand injured individuals to stay connected with their own life roles, including the worker role, by enabling them to combine both their hand exercise programme and their engagement in their usual daily activities (Townsend and Polatajko, 2013). This is important because in the first stage of this study, individuals were unclear about the impact that their injury would have on their ability to get on with their daily activities. Hand therapy protocols of care should be tailored to include the realities of their patients' lives in order to make them patient centred. This may support a shift away from the view of *blaming patients* (Steward, 2004) for not complying with their exercise programme, to a *collaborative position* that enables patients to adhere to it. This change in stance places the control back with the patients.

When participants were engaging in their day-to-day activities, they were confronted with the reality of managing the 'competing priorities' of their injury and their daily lives. It became clear to them once they had embarked on this journey, that due to the injury, it was difficult to manage both elements at a satisfactory level as discussed earlier in the physical journey section (section 5.4). Such difficulties elicited feelings of guilt about their hand injuries, their perceived poor progress and their continuing need for assistance from others. Other writers including Gustafsson and Ahlstrohm, (2004), Gustafsson *et al (*2003), Grob *et al* (2008) discuss the impact on individuals' mood following such injuries. In the current study, participants' feelings of guilt are linked to their perceived progress at the point in their rehabilitative journey when it was beginning to become clear that the hand injury would not recover in a way that they had hoped. Occupational therapists working in hand therapy, by anticipating such concerns, could potentially support a process of

helping participants gain a sense of the injury in the context of their lives by describing any expected landmarks of the rehabilitation journey and how best to manage them. This idea could be incorporated into treatment sessions and discussed as a potential issue at the point in time when patients start to engage in their usual day-to-day activities. Such feelings of vulnerability were described in this study where participants used their anticipated healing times to maintain a sense of control as they had concluded that once a period of time had passed usual functional ability would resume. Participants also reported feelings of guilt concerning their perceived inability to adhere to their prescribed treatment programme. Despite this, on closer examination the participants were following the exercise programme and in some cases exceeded it. Perhaps such feelings were linked to a perceived lack of progress that participants felt they were making. Acknowledging feelings of guilt by discussing and challenging its roots will hopefully improve the patients' experience of managing their journey; by reducing the emotional impact but to do this, occupational therapists would need to be aware of patients' day-to-day concerns.

6.4 Contemplating work

This major theme described participants' perspectives of getting back into work following their injury. Subthemes reflected participants' change in perspective over time and included 'expectations' concerning their return to work. It was often reported that they would receive support from colleagues and managers but this did not always prove to be the case. The second subtheme, 'it's not how I thought it would be' described participants' difficulty in managing being back at work and concern about how long the rehabilitation was taking. The third subtheme, 'acceptance of the work life' described participants' perspectives concerning their return to work experiences, for example what they might have done differently if they had their time again.

Participants in the study planned to return to work as soon as possible. Most returned within two weeks. The reasons cited were varied and included worry about losing their job, not being able to manage on statutory sick pay, boredom, wanting to help colleagues during a busy time at work, that it was not expected that their hand injury would greatly affect their ability to do the job and that the upheaval was anticipated to be short-lived. The Department for Work and Pensions (2013),

Waddell (2008) and Black (2008) advocate that an early return to work is advisable on the grounds that being in work has been found to be good for one's health - both economically and psychologically. The hand therapy literature also advocates the need to return to work but the ability of an individual to return to work is often viewed as a measure of surgical and rehabilitative success (Bruyns *et al* 2003). This study highlighted the fact that getting back into work is not an indicator of a successful outcome as residual difficulties may remain and need to be taken into consideration. In the same study Bruyns *et al* (2003) reported that hand injured participants took an average of thirty weeks to return to work. This was in contrast to this study where participants returned much sooner. The inclusion/exclusion criteria for this study was different to the study by Bruyns *et al* (2003) in that it was expected that the repairing structure was anticipated to take up to three months to heal whereas a repairing nerve can take a year or more to recover so this may have impacted on the results in Bryuns *et al* (2003) study.

This study identified return to work difficulties that were missed by research studies that focussed solely on medical concerns. In the study by Skov *et al* (1999) it was reported that hand injured patients often returned to work within a week of their injury but did not explain why this was the case. This study highlighted that this may be due to many reasons, - feelings of boredom, guilt at taking time off work, awareness of colleagues being under pressure of work amongst others. Such insights demonstrated that there might be many reasons why participants were not able to comply fully with their treatment programmes. The need to take such potential concerns into account when developing treatment might enable hand injured patients to engage more fully. Previous studies commented upon the fact that patients returned to work soon after sustaining their hand injury but did not describe the reasoning behind these decisions (Skov, 1999; Bruyns *et al*, 2003). In this study the decision making process concerning the return to work was examined in more depth and findings concluded that such decisions were more wide ranging than the injury alone.

Often participants did not include the hand therapy team in the decision making process when planning to return to work. When information was received from the hand therapy team it was only general in nature such as 'don't lift anything heavy' or do 'nothing heavier than brushing your teeth'. Such statements did not take into account the realities of the day-to-day activities that the participant may be confronted with. It was also unclear how participants might interpret such

statements. Discussions concerning participants' participation in work activities related to protecting the surgical repair, not examining how an individual could manage work tasks while simultaneously managing the injured hand. Guidance was aimed at improving the surgical repair and did not include the return to work needs of the person. This is usual in a hand therapy department as the focus of care is on ensuring a good surgical repair (Lucia *et al*, 2010).

Participants reported that hand therapists did not make contact with participants' managers or anybody at their place of work. No work modification plans were discussed or put into operation (Innes and Straker, 2002). Sick-leave regulations or sick pay status were not discussed, (Curtis, 2003) nor was it discussed how long the rehabilitation process would last in reality. Whether an individual returned to work or not should not be viewed as an outcome measure – a means of determining whether a surgical repair or approach to exercise was a success or not, instead the *quality* of the return to work could be focussed upon. Baril *et al* (2003) highlighted the need for managers, health care workers and other agencies to work together to plan a successful return to work. In this study this was not the case. It was the participants themselves who devised their own return to work plan as well as they could. This study highlighted the difficulties that resulted from such a lack of planning and has provided insights into how the participants managed their return to work and highlighted the need to view a patient's transition back into work as a necessary part of rehabilitation for hand injuries. Incorporating such concerns could be one method of making such interventions more relevant to participants. As has been previously discussed (see: 'naivety' and 'it's only a finger', section 5.4.1 and 5.5.1) participants were not clear as to what the impact of their hand injury would be on their ability to participate in their usual day-to-day activities in the initial stages following their injury. It was commonly reported that there was an expectation that there would only be a need for a few weeks of modified work activities before they resumed their normal level of work.

The participants who were not injured at work made contact with their managers to let them know that they had been injured. A range of responses from the workplace was reported by participants that included that the participant should return when ready to do so or to return as soon as possible and that a level of modified work activities would be arranged. Shaw *et al* (2003) describes the need to include the manager when planning to return to work and to arrange suitable modifications to assist with this process. The Equality Act (2010) has enshrined in law the

responsibility of employers to assist sick or disabled employees back into work by providing reasonable adjustments to the workplace for example. Although this act usually provides support for individuals with more chronic disabilities the principle of there being the possibility of support from the workplace is apparent. In this study, most participants made no explicit or formal return to work plan. The only information that managers or colleagues received about the injury came from the participant. For these participants, it was not clear to the researcher what type of work modifications were put into place prior to their return to work. Perhaps the need to try and minimise the potential impact of their injury on their ability to do the job may also have been linked to a perceived need to get back to work in order to ensure that their job or payment would be secured. In addition, the search for a sense of continuity after sustaining an injury added to the attraction of securing a speedy return to work.

This study revealed the risk attached to viewing return to work as a positive outcome measure for this patient group. Butler *et al* (1995) demonstrated that once back at work individuals who had sustained musculoskeletal injuries reported difficulties and in fact some returnees were later unable to sustain their ability to resume their work duties. In this study similar findings became evident and participants reported difficulties once back at work. In addition both office workers and manual workers reported that their main difficulty was not solely concerning the hand injury itself and the functional realities that this entailed but instead how best to manage their time once back at work. Joss (2011) concurred that it is often not the injury itself that is the main obstacle when attempting to return to work but the lack of planning in considering the needs of the job and how specific modifications will be implemented.

Once some participants had returned to work difficulties arose on many occasions. As the findings showed, participants who chose to return to work expected to make a full recovery once the repaired structure had healed as it was ‘only a finger’ that had been injured and it was expected that the sense of upheaval would be temporary. Participants reported experiencing a lack of understanding from colleagues and line managers about the level of support required. Shaw *et al* (2003) commented upon the need to develop a return to work plan which may include discussions with managers, colleagues and families. Grunert *et al* (1992) also highlighted the need to consider a potential psychological component when contemplating a return to work. For example Grunert *et al* (1992) argued that if an individual was injured at work he/she may initially be reluctant to use the piece of

equipment that they had been using when they had been injured and may need assistance. Even practical considerations such as planning how the individual would travel to work need to be discussed. Patients reported many difficulties once they had returned to work. It was not how they 'expected' it was going to be. Some felt guilty for needing to ask for help from others, or guilty that they may have been risking their surgical repair by feeling compelled to carry out activities that may have caused harm. Others became frustrated at managers and colleagues for not being aware of the struggle they were experiencing. It could be argued that if the manager or colleague was unaware of what the implications were it would be difficult for either of them to anticipate and provide assistance.

When asked at the final interview, all but one of the participants stated that they would not have liked to have been told that their rehabilitation programme would take up to six months. As a result of the insights gained in relation to the adaptive process, information as to how a participant progresses could be used as a way of managing expectations. The therapist's knowledge of the patients' anticipated progress could be integrated into post-operative rehabilitation programmes to allow for relevant information to be disseminated at the appropriate stage of adaptation. For example, participants made plans to return to work whilst holding an expectation that once back at work they would be able to manage as well as they had previously done so. However, they made this decision without knowing how to integrate the competing demands of rehabilitation and work. Participants reported that the information provided by hand therapists was limited to the exercise programme and to the broad examples of functional activities that were permitted. This resulted in the patient being the person who developed the return to work plan in the absence of the specialist knowledge of how to do so. These findings highlight the need to broaden rehabilitation programmes from a type that solely focuses upon the functional restoration of the hand to an approach that includes broad rehabilitation needs that could include financial concerns, the need to make contact with line managers and discuss what family commitments need to be considered. Occupational therapists working in hand therapy could then fully execute their professional role to better support patients with hand injuries through their journey back into work.

From the findings, the question arose as to whether various elements of the return to work experience described by participants (for example guilt, powerlessness, and concern about harming repair) were all linked to participants having returned to work

without an appropriate plan that took into account competing needs. When participants had to devise their own return to work plan, the only information they had access to was the exercise plan that they had been given for their repaired structure. Hence, when participants were told that a fractured bone takes on average six weeks to heal, they may have interpreted this to mean that once six weeks had passed they would return to premorbid level of function (see 'naivety' section 5.4.1). In this case the information relating to the physiological healing process was not sufficient to help the participants develop appropriate return to work plans. It could be argued that when participants described their managers as becoming unsupportive, this could be related to unrealistic expectations arising from the aforementioned inappropriate return to work plan. Any joint planning between the patient and the manager appeared to be based solely on the limited information provided by the participant, which in turn had been informed by the limited information given by the hand therapy team. It was the participant alone who had to make sense of their new circumstances.

In the United Kingdom today no agency takes the lead in assisting participants to return to work (Joss, 2011). Although there were multiple professionals involved in the participants' care, no one agency coordinated the return to work process. For example, the GP's main involvement was in providing a 'fit' note, the medical team's main focus was on ensuring a safe surgical repair, the hand therapists were concerned with positive rehabilitation of the repaired structure and if social services were involved, this was only to assess whether or not an individual was entitled to benefits. McCarthy (2011) comments that the difficulties of issuing 'fit' notes is that they are not clear about the stresses of the day-to-day requirements of the job and GPs reported difficulties when attempting to accurately help their patients plan a return to work plan. Suff (2011) reported that managers were pleased with the idea of the 'fit' note but commented that it was not always clear to them how best to put into practice the work modification suggestions given by the GP. It could be argued that occupational therapists in hand therapy departments are well placed to undertake this liaison role as the patient will have most on-going contact with hand therapists throughout their rehabilitation phase (on average six to eight weeks). This suggestion is also in line with occupational therapy core values of looking at the patient holistically and incorporating their needs when developing rehabilitation interventions to enable them to function as independently as possible. The College of Occupational Therapists (2007) stated that occupational therapists should ask the "work question" of their patients and consider the need to include return to work

issues as part of their core assessment and interventions (College of Occupational Therapists, 2007, p.25).

Participants were not able to plan a return to work in isolation. They had to attempt to manage their day-to-day lives, come to terms with their hand injury and what this may mean while planning to return to work on their own. It is argued here that occupational therapists are well placed to provide assistance with this patient group to help manage a successful return to work plan. Insights gained into the adaptive processes that individuals experience once having sustained a traumatic hand injury, could be used to provide the bridge from theory to practice (Jack and Estes, 2010). Adapting rehabilitation interventions that reflect the adaptive process of individuals may go some way to assisting them in making a smooth transition back into work and recovery. The next chapter will describe the development and piloting of a return to work intervention for this patient group developed, using the findings of this first part of the study.

The first research question for the first stage of the study was to attempt to explore in detail individuals' experiences of returning to work following a traumatic hand injury in a United Kingdom-based hand therapy unit (section 2.8). Use of reflective lifeworld research methodology with a longitudinal perspective was used to underpin the study. The findings indicate that examining the lifeworld of individuals provided a perspective that illuminated the experiences of individuals who had sustained a traumatic hand injury by providing a caring focus on the participants. Such a focus provided an opportunity to answer the research question in this study in a way that included the perspectives of the participants involved in the first part of the study.

6.5 The adaptive process

Findings from this study demonstrated that individuals continually try to make sense of their recovery from injury and that personal, social and environmental experiences continuously interact over time and shape their perception of their injury and the decisions that they make. This concurs with adaptation models described by Schkade and Schultz (1992); Schultz and Schkade (1992); Livneh and Antonak, (1997) and Livneh (2001) (section 2.5).

The findings from the first stage of the study indicated that the participants' ability to adapt appears to occur at two levels that equate to the physical and emotional journey. As has been previously described, participants often attempted to get on with their usual day-to-day functioning as soon as possible after their injury. Livneh and Antonak (1997) described this as early reactions of shock, anxiety and denial. It was not until it became clear to the participants that the impact of the injury would be more far reaching that the reality of the injury began to become clear.

Decisions about their future ability to re-engage with their day-to-day activities were made at this time – the physical journey. Once the participant began to participate in their usual daily activities an emotional understanding of the functional capacity of their hand injury began to emerge. It became clear that the injured hand would possibly not now return to its previous level of function and appearance. The physical nature of the injuries caused more functional difficulties for some participants than expected and for a longer period of time than was anticipated. It appeared that it was not until the participants' emotional engagement with the hand injury became clear through their functional activities that they began to allow themselves to gain an understanding of the realities of their injury and how it was going to impact on their ability to function. It was at this time that it appeared that the process of adaptation changed to what Livneh and Antonak (1997) viewed as intermediate reactions of depression, internalised anger and externalised hostility. Participants in this study became angry with perceived lack of support from managers, colleagues and friends; guilty for not being able to function as they had expected or participate in their rehabilitation programme as they felt that they should have. The authors described the process but as Kendall and Buys (1998) noted Livneh's and Anonak's (1997) model was not predictive as to how an individual might adapt to their new found situation following trauma. Chan and Spencer (2004) concurred with the need to include patients' concerns when developing rehabilitation programmes but did not describe how this might be done. The longitudinal nature of this study provided insights into how participants' subjective perspectives and experiences shaped decisions that they made.

In this study it was often reported that participants were aware that their injury would impact upon their ability to manage their day-to-day work practices but social, environmental and personal concerns needed to be taken into consideration as well when the decision was being made to return to work. Participants were aware of the potential physical constraints that being back at work might entail but it was not until

the participant had returned to work that the realities of managing an injury while attempting to manage the needs of the working day became clear. The competing priorities of the work, the exercise programme, the expectations of managers and colleagues and the roles and responsibilities in the participants' lives needed to be considered. Once the participant gained an emotional insight into the realities of being back at work it was realised that being back at work was not going to be how they thought it was going to be. It was then that participants began to adapt to the realities of their injury and could clearly view needs and expectations in relation to managing their injury. The participant made a transition between being injured through to being in the work role. The adaptive process was linked to not only the expectations of the participant but also to those of the line manager and colleagues. The findings from this study demonstrated that the process of returning to work is not solely concerned with the healing structure (Bruyns *et al,* 2003) but social and economic factors as well (Ramel *et al*, 2013).

Following on from the realisation that it was proving difficult for some participants to manage their competing priorities, participants voiced 'regrets' about their rehabilitation experience. These regrets were revealed through blaming both themselves and others for decisions that were made. Feelings of guilt for not being able to fulfil their usual roles such as assisting with child care or both needing and having to ask for help from others were common in this study which is similar to the findings of Schier and Chan (2007) although these authors did not explore how such information could be used to develop rehabilitation interventions for this patient group. Frustration was described by participants at the perceived lack of insight from others who it was felt should have been able to anticipate some of the difficulties they were experiencing.

The root of these feelings may be linked to uncertainties concerning how to manage the competing priorities that participants were faced with at the time of their injury. Participants were unclear about the reality of living with a traumatic hand injury and what this would mean. Decisions were made and plans put in place with not all the relevant information about their journey available to them. Chan and Spencer (2004) and Strong (2005) suggest that individuals do finally reach a point of adaptation. The findings from this study concur with these findings but the longitudinal nature of this study highlighted how the adaptive processes changed over time. As has been described (section 5.4.1) it was a commonly held view that when the individual was first injured that they considered that the injury was not as serious as it turned out to

be. In addition it was not fully understood how long the healing process would take or what the ongoing impact on their ability to engage in their usual day-to-day activities would be. The ability to understand the adaptive process over time could enable therapists to tailor rehabilitation interventions in a way that would be pertinent to hand injured individuals at various points on their journey back into recovery. This is a role that occupational therapists could assume when developing interventions for this patient group. One such example could be that occupational therapists could support patients in understanding about the seriousness of the hand injury in the first few weeks following the injury, in order to give them more of a sense of control and the ability to make more informed choices. Then later in the rehabilitation process, the occupational therapist could give information about the fact that it is usual for the recovery process to appear too slow and take longer than initially anticipated. Integrating healing concerns with the ability to engage in usual daily activities throughout the rehabilitation process may have made the process of adaptation a smoother one and helped to make the experience more controlled for the participant. Introducing occupational therapy principles into the rehabilitation programme provided an opportunity to go beyond traditional hand therapy to focus on the whole person, not just the hand. Adaptation could be viewed as a dynamic process that changes over time rather than a one instant event. In this study, the longitudinal component of the study afforded an opportunity to gain insights into how the participants adapted to their new circumstances.

The use of reflective lifeworld research in the first stage of this study was chosen as an opportunity to gain insights into the meanings that individuals attribute to their experiences of returning to work following a traumatic hand injury. The focus on the lived perspectives and a caring ethical approach (Todres *et al,* 2009) were deemed useful in this study as a means of gaining an holistic perspective of this client group. This approach has been used in previous studies to provide such a focus that includes individuals' concerns (Johansson *et al*, 2009; Bremner *et al* 2009) and this study provided an opportunity to move from purely medical concerns to patient ones. This qualitative approach provided an opportunity to gain insights into less palpable meanings that individuals experience in their day-to-day lives and, in the first stage of this study, the experiences of hand injured patients. Dahlberg *et al*, (2009), suggest that when health care workers are "*open to the lifeworlds of their patients, to listen to their stories, to touch and be touched, without avoiding the ambiguities of existence*" (Dahlberg *et al*, 2009, p.8) it can provide an opportunity to include their concerns in the development of rehabilitation interventions. Johansson

et al (2009) highlight that the ability to transfer the results of a reflective lifeworld research study can be supported by the descriptions of the participants, the context, data collection and analysis in order for the researcher to appraise its applicability in other contexts.

6.6 Summary

The first stage of this study has offered insights into the complexities participants experienced when returning to work while managing a traumatic hand injury. The role that hand therapists play with this participant group focussed upon the management of the repaired structure and the interventions they provided have been developed to ensure that the possibility to do this are maximised. Advice with regards to assisting the participants in this study to get back to work while managing their injury was limited. Currently, the focus of rehabilitation programmes for hand injured patients is upon the repairing structure and not on patients' concerns (Evans, 2012). Information was not forthcoming about how the participants could accomplish their work tasks while managing their surgical repair at the same time. Occupational therapists generally aim to follow a client-centred approach in their interventions (Sumsion, 2000) - so then it follows that patient concerns should be central to rehabilitation interventions, so if their normal role were to be implemented in a hand therapy setting, patient concerns would be central to interventions that are offered to this patient group. Hand therapy services for this patient group focus more upon the acute treatment needs to the exclusion of incorporating patient concerns (Joss, 2002). There is a role for occupational therapists working with hand injured patients to re-engage by including such concerns in the acute phase of treatment (Thurgood and Frank, 2007). Most participants opted to return to work within two weeks after being injured, usually when still attending outpatient hand therapy appointments so the occupational therapist working in hand therapy would be well placed to include a return to work component in the interventions offered. This could make interventions more relevant for the participants and afford an opportunity for them to work with their occupational therapists rather than purely being the recipient of advice from a medical expert.

Insights gained from interviewing participants at three separate points on their rehabilitation journey were valuable in demonstrating that participants' perceptions of their injury changed and adapted over time. Reflective lifeworld research

(Dahlberg *et al*, 2008) was used and it afforded an opportunity to gain insights into the participants' return to work experience which may be meaningful to other people who have experienced such injuries. At the participants' final interview, a common reflection was that they had not realised the impact that such an injury would have upon their ability to get on with their day-to-day lives. In addition, it was not clear to them that it would take many more months than they realised for the injury to reach a point where their hand would have recovered sufficiently to allow them to manage their day-to-day activities independently. To have been told this at the time of the injury would have been too overwhelming for them to take on board. Instead this information could be viewed as an opportunity for occupational therapists to help patients manage their rehabilitation by giving them information concerning what they may be able to expect at the various points in their post-operative journey. Insights from this study could be used by occupational therapists to manage participants' expectations of their abilities throughout their rehabilitation.

In this study participants devised their own return to work programme by using information they had available to them. They expected that the injury would only disrupt their usual activities for the first few weeks following their injury. Once they were back at work unforeseen difficulties arose. The injured hand took longer to regain its functional ability than anticipated - which meant that it also took longer for participants to be able to manage their usual work duties. Participants needed support from colleagues and managers to modify their work duties while they were recovering from their injury but they were also unclear as to the level of support that was required as well as how long such support would be required. It was reported that this caused misunderstandings between both managers and participants which caused the return to work experience to often become difficult. Participants recognised that they were finding it difficult to both manage their rehabilitation programme and do their job at the same time. Work often took priority causing participants to feel guilt about not being able to do either their job or rehabilitation to a standard that they would like. Participants reported difficulties asking for help at work and they reported that managers did not understand the need to provide a form of modification to their usual working practices for a period of time. Occupational therapists could play a role in assisting individuals with traumatic hand injuries to consider the implications of their injury in relation to getting back to work. Anticipating such difficulties and providing information for the injured individuals as well as managers and colleagues could help all parties manage the return to work

journey in a way that could enable the individual to manage both their repairing hand and their job at a reduced level during the rehabilitation phase.

The second stage of this study will use the findings from the first stage of the study to examine how occupational therapists could incorporate a return to work intervention into their usual rehabilitation intervention for this patient group. Including participants' experiences and insights would help to ensure that such an intervention would be meaningful and relevant for them. The next chapter will examine how such an intervention could be developed to ensure such insights are included as well as the theoretical underpinnings of such an intervention. Insights include:

- Participants were unaware of the potential impact of the hand injury on their ability to get back to, and engage in, their usual work activities.
- Many participants were unaware of the practical implications of being back at work – being unclear about the sick-leave policy of their workplace for example.
- Some participants found it difficult to ask for work modification or support from their managers once they had returned to work.
- Many participants were unaware how long their recovery would take.
- Therapists were not formally involved in return to work planning.

Chapter 7: Stage two: Development of the return to work intervention and pilot study

7.1 Introduction

The findings from the first stage of this study highlighted difficulties participants experienced in many aspects of their day-to-day lives after sustaining a traumatic hand injury including the ability to return to work. Using a Reflective Lifeworld Research approach (Dahlberg *et al*, 2008) provided an opportunity to examine the experiences of participants when they were attempting to get back to work after experiencing a traumatic hand injury. This intervention has been developed to include an occupational therapy perspective, however, is intended for use by hand therapists who may by profession be either physiotherapists or occupational therapists. As a result the intervention materials have been developed using the term hand therapists rather than occupational therapists. In the unit where the return to work intervention was piloted, the staff working as hand therapists happened to all be occupational therapists.

Participants were the main individuals involved in their own return to work planning and received little specific support from their hand therapists or from their managers or colleagues. The difficulties participants experienced highlighted that a means of assisting individuals to return to work would be of use, and that this assistance should take into consideration the need to balance both their day-to-day needs as well as their rehabilitation needs. Focusing upon the lifeworld of individuals in the first stage of the study provided an opportunity to gain a sense of the meanings and experiences of their return to work journey and this section will continue to draw on such an approach to underpin the development of a return to work intervention for this patient group (section 3.4). The development of this return to work intervention will be described and the role that occupational therapists can play in assisting return to work for this patient group will be discussed. The need to be client-centred in the development of the intervention will be raised in conjunction with the need to enable participants to manage their hand therapy programme at the same time.

The second part of this chapter describes the methods used for the implementation and pilot study of the return to work intervention. The aim of the second stage of the study was to examine the return to work experiences of individuals who have

sustained a traumatic hand injury while using the return to work intervention. This intervention has been developed to be able to be used by occupational therapists working with hand injured patients in a hospital setting. The return to work intervention will be piloted using the lifeworld approach explained in chapter three and used for the first stage of the study.

7.2 Developing the return to work intervention

7.2.1 Developing an information sheet for patients

Todres *et al* (2007) advocated the use of an individual's lifeworld as a way of including patients' experiences to underpin care (Figure 3.2). Such an approach would provide an opportunity to develop treatment interventions that place emphasis on patients' needs rather than on technical or political factors by becoming 'lifeworld-led' or "*grounded in qualitative experiences of people*" (Todres *et al* 2007, p. 61). The first stage of this study examined over time individuals' experiences of returning to work following a traumatic hand injury and insights gained from the meanings of individuals' experiences were used to develop a proposed return to work intervention.

Insights gained into the adaptive processes of individuals following their injury highlighted that most of the participants were initially unable to fully grasp the significance of what it would be like to be back at work. In addition, participants were often under the impression that once they had returned to work they would need an undefined period of modified duties before being able to continue fully with their normal work activities. Participants' expectations were that the need for any work modifications would be short lived. Similarly, participants often reported that the reality of being back at work was not the experience they had anticipated. Participants commonly reported that they felt powerless to discuss specific work modifications with their manager or colleagues. Participants lacked insights into how to best manage their return to work both at the planning stage and during the initial couple of weeks at work. The researcher decided to focus the development of a potential return to work intervention at these two points. Firstly, this could provide an opportunity to discuss and plan how an individual might manage their day-to-day work requirements while managing their hand injury. Secondly, it might begin to

address the sense of powerlessness that participants experienced by informing participants' managers what type and duration of modifications might be needed.

In the department where this study was based, it is standard practice that an individual will be asked about the nature of their employment at their initial assessment. This is asked in order to inform patients about what they functionally should do at work in order to protect the repairing structure. The findings from the first stage of this study indicated that individuals were often unclear as to how they would be able to manage their hand injury while being back at work and that most individuals returned to work before the repairing structure had fully healed. A need to acknowledge this potential reality was deemed important for hand therapists to begin to discuss the implications of a potential return to work with their patients.

The researcher considered that the discussion about potentially returning to work at the initial hand therapy assessment could be expanded to provide an opportunity for patients to think in greater detail about what being back at work might entail. Rather than devising a return to work plan at the initial assessment, the focus would be on the practicalities of getting back to work that participants in the first stage of the study had not contemplated or been aware of. It was decided not to overtly label this a return to work intervention as it was considered possible that the individual may not yet be fully focussing upon getting back to work and instead may be trying to come to terms with the significance of the injury that they had sustained. It was important for the occupational therapist not to convey a message that the individual should consider going back to work at that stage. The first phase of the return to work intervention was developed to reflect this. An information sheet titled "Things to consider if you intend to return to work" was designed (Appendix 15) to be issued at the first outpatient appointment. It was proposed that the information sheet could be used to prompt participants and hand therapists to discuss in an informal manner the potential implications of going back to work. It would provide an opportunity for the hand therapist to gain deeper insights into how the patient is attempting to engage in their daily occupations (Townsend and Polatajko, 2013). The purpose was to get participants to begin to consider the practical implications of the injury that they had sustained. The information sheet included issues for participants to consider that reflected concerns raised by participants in stage one of this study (see section 5.7):

- Does your company or work place have a sick leave policy? Will you be entitled to any sick leave?

- Does your company or workplace pay sick pay? What amount will you be entitled to?
- Have you spoken with your line manager or colleagues about the injury? It might be useful speaking with the hand therapist to discuss this further.
- How will it be possible for you to manage the exercise programme whilst working?
- Will it be possible for you to attend hand therapy appointments when back at work?
- Will you be able to manage your usual work tasks?

This information was derived from the experiences of the participants in the first stage of this study (see section 5.7). In addition, discussing the contents of the information sheet provided an opportunity for the occupational therapist to explain in more detail anything that was unclear but also to begin a more formal return to work dialogue with the patient.

7.2.2 The return to work plan

The second phase of the return to work intervention was made up of a return to work letter. This letter was to be written jointly between the occupational therapist and the participant. It was intended to be written just prior to, or at the point when the participant was intending to return to work. The aim of the letter was to provide detail of a return to work plan for the manager or Human Resources Department at the participant's place of work. Another aim was for the occupational therapist providing hand therapy to, additionally, take an active role in return to work planning by making a link between the hand therapy programme and the expected ability of the participant to manage their work tasks. Participants in stage one of the study reported that, once they had returned to work, colleagues and managers often did not fully understand the implications of their hand injury. Once back at work, participants often reported that they felt unable to express any difficulties that they might be experiencing to their manager or colleagues and they worried about their ability to do their job and manage their hand injury at the same time. It was intended that the contents of the return to work letter would address these concerns in advance. It was expected that the letter would include the following information:

1) **A brief summary of the injury**. Participants in stage one often cited the fact that they did not think colleagues or managers really understood the impact

that their injury would have on their functional ability (section 5.6.3). It was considered unnecessary to go into technical detail about the injury in the letter, but to simply state that the injury had occurred, surgery had been required and that a postoperative hand therapy programme was necessary to ensure an optimum outcome (section 5.6.3).

2) **The amount of time it would take the injury to recover**.
Most participants expected their hand injury would recover fully in a short period of time (about six weeks) (section 5.4.3). They were unaware of the residual issues of oedema and stiffness that could have an impact on function for up to six months. Providing a realistic time frame for the rehabilitation process was deemed essential as it was considered an opportunity to help manage the expectation of both the participant and the manager in how long they may be working below their usual standard of work (section 5.4.3). This may appear to contradict comments made by some participants in stage one who reported, at their third interview, that they would not have wanted to know, when first injured, that their rehabilitation may take up to six months. They suggested that they might have felt overwhelmed by this knowledge (section 5.6.3). Including an idea about how long the rehabilitation would take was viewed as important as many participants, when first injured, reported to their manager that their injury would resolve in a few weeks and that they would be able to return to their usual work duties. Including information about the perceived duration of the rehabilitation programme also provided an opportunity to include a time frame for modified activities. This could provide an opportunity for occupational therapists to include realistic information about the ability to manage various work tasks as the injury repaired over time.

3) **Work modification**. Participants often had unrealistic expectations about their ability to do their usual work tasks to the standard they were capable of prior to their injury (section 5.6.1). The reality was that many participants in the first stage of the study opted to return to work before the hand was fully repaired (section 5.6). The occupational therapist would discuss with their patient in detail what the patients' usual work tasks are made up of. The occupational therapist would then discuss with the patient how he/she might be able to complete these work tasks while managing a traumatic hand injury. The occupational therapist would contribute to this discussion by providing detail about how these work tasks might be modified so that the

repairing structure would remain safe. Any modifications that were decided upon would need to be written in the context of their period of hand therapy and the expected amount of time these modifications would be needed for (Baril *et al*, 2003). It was also considered essential to include a request that the patient would be released from work to attend outpatient therapy sessions for the expected rehabilitation period – usually up to three months. Many stage one participants had neglected to attend their therapy appointments as they felt unable to ask for the time off (section 5.5.2). Ability to travel to and from work could also be included in any proposed modified return to work plan.

4) **Potential contact with the occupational therapy department**. An opportunity for the patients' manager/Human Resources Department to make contact with the occupational therapy department was included (Kasdan and June, 1993). This was added to enable managers to clarify any points that were made in the main body of the return to work letter. Stage one participants reported that their manager did not appear to understand the implications of the hand injury on their ability to work to their usual level (section 5.6.2). Patients would be made aware of this option and written consent of the patient would need to be gained and recorded in their therapy notes to give permission for the occupational therapist to potentially discuss the contents of the letter with their manager. It would be made clear to the patients that only the contents of the letter would be discussed if the manager opted to make contact with the therapy department.

Another aspect of the return to work intervention relates to the client-centred approach used in the occupational therapy department itself. The language used by therapists would need to change from mainly focusing upon the restoration of the repairing structure to one that includes ideas about return to work advice throughout the patient's period of rehabilitation. Stage one participants stated that they would have found it difficult to take on board the full reality of the implications of their hand injury at the beginning of their rehabilitation journey. Instead, by supplying information, as it was needed, for patients, as they progress through their rehabilitation process may enable them to manage their expectations more realistically. For example, it may have been useful to have discussed how the individual would be able to manage day-to-day functional activities while participating in their hourly exercises. This level of containment on the part of the occupational therapist could go a long way to prevent uncertainty by establishing in

advance what can realistically be achieved or delivered for both the patient as well as the manager. An aim of this intervention is to make a shift from mainly focussing on the injury and the hand therapy programme to one that places more attention on the individual's world and how they may manage their hand therapy programme while participating in their day-to-day activities, including their work world. The letter was to be given to the participant to give to their manager or Human Resources Department and was not delivered to the workplace by the occupational therapist. This was deemed important as a means of maintaining a sense of control in the return to work process for the patient.

The occupational therapist will have to integrate discussion of functional issues, in the context of maintaining the patient's repairing structure, with discussion about their return to work needs in the context of patient's day-to-day activities in order to try and make their rehabilitation programme relevant and achievable. The occupational therapist will have to continually monitor progress with the patient at each out-patient appointment and use these appointments to continue to offer advice at an appropriate time. On average individuals with traumatic hand injuries attend outpatient occupational therapy appointments for about twelve weeks, therefore it is anticipated that the ability to monitor return to work progress will be done at the usual follow up appointments.

The first three months are the time of greatest change and adaptation for the hand injured patient (Gustafsson *et al*, 2012). This is the typical amount of time individuals receive follow up in a hand therapy department after a hand injury. It is also important that an intervention is developed that takes into account the realities of working in a busy outpatient hand therapy department and that can realistically and feasibly be used by occupational therapists working in this setting.

Dahlberg *et al* (2009) argue that the emphasis on patients' choice in modern healthcare provision could be viewed as an economic or political construct. This misses the opportunity of truly gaining insights into individuals' perspectives and of then including such perspectives in the development of health care interventions. In addition a political perspective can be taken if the emphasis on patient participation focuses upon their rights and sense of empowerment. The authors argued for the need for such insights gained from individuals' experiences to be used to develop interventions used in modern health care settings. The return to work intervention used in this study has focused upon individuals' experiences to underpin it.

The development of the return to work intervention has been based on the findings of the first stage of the study. It has been devised to also take into account the realities of how occupational therapists would be able to manage such an intervention. The use of a lifeworld-led approach to underpin the development of the return to work intervention was intended to make the intervention appropriate and relevant to the needs of the individuals. The intervention is made up of two phases: the first phase is an information sheet (Appendix 15) that has been devised to enable patients to start thinking about the realities of getting back to work, the second phase is the writing of a return to work letter by the occupational therapists in conjunction with the patient (Appendix 16). This letter is to include: a brief description of the injury, the time expected for recovery, modifications to work (including methods to enable the patient to maintain their rehabilitation programme) as well as an invitation to the manager to contact the occupational therapist. Both of these aspects of the return to work intervention are run in conjunction with the occupational therapist in order to provide some perspective during the individual's rehabilitation and return to work journey. Such a perspective could provide an opportunity to help the patient manage their expectations at the relevant points throughout their journey. The general approach of the occupational therapy department should incorporate a focus on return to work with patients. The next section of this chapter will describe the methods used to pilot the return to work intervention.

7.3 Study site

The site chosen to recruit participants to pilot the return to work intervention was the same large inner city teaching hospital that was used in the first stage of this study. The researcher works full-time in this department and is familiar with the policies and procedures used.

7.4 Recruitment process

Before the pilot study began the researcher met with the occupational therapy team based in the department where the study was to be conducted, to update them on the findings of the first stage of the study and to describe how these findings had been used to develop a return to work intervention. An information sheet was given

to the therapists which summarised the features of the pilot study and the planned inclusion criteria (Appendix 17). An inservice training session was held with the therapists to explain the proposed return to work intervention in more detail and how it was anticipated it would be used with participants in the second stage of the study. It was explained that the first phase of the return to work intervention was made up of discussion points to be used when carrying out their usual initial assessment. It was emphasised that this was to be used as an opportunity for the participant to begin thinking about what being back at work might mean for them within the context of managing their hand injury. It was anticipated that it would take about 5 minutes to administer. Occupational therapists' opinions were not used to modify the first phase of the return to work intervention as the researcher wished to keep the return to work intervention based in the participants' perspectives from the first stage of the study. A record of occupational therapists' reported difficulties during the implementation of the second phase of the return to work intervention was kept by the researcher. These comments were reviewed during the analysis of the implementation study and are considered in the findings (section 8.5) and the implications for further development (section 9.7). Whilst occupational therapists' opinions were not used in the development of the return to work intervention, it is proposed that these opinions will be used to further develop the return to work intervention for any future research. Occupational therapists reported difficulties when co-writing the return to work letter. Comments made included concerns that there might be legal implications about the return to work plan, the level of detail needed and whether the proposed planning would be clear to the participant's manager or line manager.

Participants were adults over eighteen years of age who had undergone a traumatic hand injury. They were recruited from the same department as the first stage of the study. Inclusion/exclusion criteria for participants in this pilot study will be the same as in the first stage of the study. That is:

The inclusion criteria are:

- Participants were adults between the ages of 18 and above, who were receiving outpatient occupational therapy for at least eight weeks. As a consequence, most participants had nerve injuries, tendon injuries, fractures or a combination of all three.

- As the study examined return to work experiences, participants were required to have been in full time work for at least six months prior to their injury.

The exclusion criterion is:

- Patients who were self-employed.

Staff in the hand therapy department identified potential participants for the first phase of the return to work intervention. Potential participants were identified shortly after their referral to the occupational therapy department. They were approached by one of the therapists and asked if they would be interested in being involved in research that aimed to examine their experience of returning to work following a traumatic hand injury. Those that were interested met with the researcher in the department to discuss the aims of the study in more detail. In addition a copy of the Participant Information Sheet (version 2) (Appendix 18) and the consent form (version 2) (Appendix 19) were given to the potential participant at that time to give them an opportunity to consider the implications of participating in the study in more detail.

The potential participant was asked at their next therapy appointment if they were still interested in taking part in the study. This was usually one week following the initial meeting. Those that were interested, were asked to sign the consent form and were also given the first part of the return to work intervention hand out –'Things to consider if you are returning to work' (Appendix 15) by their occupational therapist.

The sampling strategy used in this section mirrors that developed for the first stage (section 4.3). Due to the qualitative nature of this second stage generalisability was not sought by using a large sample size; instead the aim was to explore meanings that participants attribute to their experiences of getting back into work (Dahlberg *et al*, 2008). As participants who had sustained a traumatic hand injury were the focus of this study, a convenience sample strategy was used. Potential participants were approached in order of referral. Seven participants were recruited to allow investigation of a variety of hand injuries whilst remaining manageable within the remit of a pilot study. This mirrors the number of participants from the first stage of the study.

7.5 Data collection method - interviews

As described in the first stage of the study, in reflective life world research, data gathering is governed by three factors:

1) the nature of the phenomenon,
2) the research question and
3) the aim to examine the lifeworld of the phenomenon under study and the research process.

In the second stage of the study, the phenomenon under investigation was individuals' experiences of using the return to work intervention and returning to work while managing a traumatic hand injury. The participants were taking part in a pilot of a return to work intervention developed from findings of the first stage of this study. Gaining insights into such experiences is complex and ambiguous, therefore an interview based method of data gathering was deemed appropriate. Qualitative interviews were used as a method of gaining nuanced descriptions of the lifeworld of the participant group prior to attempting to gain insights into the meanings that they attribute to their experiences (Kvale, 1996). In this study such complexity was anticipated and taking a hermeneutic Reflective Lifeworld Research approach, the use of interviews provided an opportunity to gain insights into the phenomena under investigation. It was proposed that participants would be interviewed once only, at about eight weeks after they had been back at work. This timing was considered to be appropriate as findings from the first stage of the study demonstrated that individuals initially had difficulties once they had got back to work.

Semi-structured interviews were used to allow for a rich opportunity for new insights and new ways of "*listening to the voice of the lifeworld and at the same time to strengthen it*" (Dahlberg *et al*, 2008, p.184).

7.5.1 Interview procedure

Participants were invited to choose where the planned interview would take place to make the interview process as convenient as possible. The researcher advised the participants that the interview venue would ideally be a quiet space.

Of the seven participants recruited to the second phase of the study, all opted to be interviewed in a quiet room in the occupational therapy department. On five occasions this coincided with days participants were attending the department for therapy sessions, the remaining two came into the department specifically to be interviewed for the study.

The aim of the interviews was to gain insights into participants' lived experiences of the phenomena of getting back into work following a traumatic hand injury. The participants in this second stage of this study were involved in a pilot study of the return to work intervention devised from the findings in the first stage of this study. It was planned that participants would be interviewed at about eight weeks after they had returned to work to gain insights into their experiences of returning to and being back in, work. The interviews were semi-structured as there was an emphasis upon the experience of getting back to work. An interview topic guide was developed (Appendix 20). The questions in the topic guide were introductory in nature or were designed to enquire about areas of interest that focused upon the phenomenon under investigation. Further questions used were prompts and were to be used as a memory aid and would not necessarily be used in the interviews themselves.

It was deemed essential to maintain an awareness of the biases and experiences of the researcher to ensure that they would not colour the line of questioning and to ensure that the focus upon the lifeworld of the participant was of primary concern.This was done through the use of bridling in section 7.7. The second stage of the study was designed not to replicate the first stage of the study but instead to gain insights into the experiences of getting back to work while using the return to work intervention. Pannucci and Wilkins (2010) define bias as "*any tendency which prevents unprejudiced consideration of a question*" (Pannucci and Wilkins, 2010, p.619).

7.6 Ethical issues

Potential participants were made aware of the study at their first post-operative appointment by occupational therapists in the department where the study was taking place and if the potential participant was interested in taking part in the study a participant information sheet was given to them at that time (Appendix 18). They were then telephoned by the researcher about one week later and if they were still

happy to participate in the study written consent was gained at the interview (Appendix 19). Participants were made aware that the interview would be audio-recorded by the researcher during the telephone conversation and again at the interview. The recorder was shown to the participants and its method of operation explained. It was made clear that all information would remain confidential. As in the first stage of the study, it was arranged that potential participants would have access to a clinical psychologist if the participant felt that it would be beneficial for counselling support if they became distressed by the research interviews for example (Appendix 7).

An amendment was made to the research ethics (NRES) protocol by adding the plan to devise and pilot a return to work intervention. A favourable ethical opinion was given by the NRES committee, East London and the City on 15th October 2012 [REC number 09/H0703/99 Amendment number: AM01] ReDA ref: 006943BLT (Appendix 21). Final R&D approval for the second stage of the study was granted on 15/10/2012, [reference number 006943] (Appendix 22).

It was made clear to all participants that any information gained and then used by the researcher would be kept confidential. A similar approach was taken in this stage as was taken in the first stage of the study (see section 4.5).

7.7 Methods of analysis

All seven interviews were audio-recorded and transcribed verbatim by the researcher. The method of analysis used was the same as that used in the first stage of the study as described by Dahlberg *et al* (2008) (see section 4.6). However, as only one interview was carried out per participant there was no longitudinal perspective to integrate. Quotes from the interviews are recorded in the text with the participant's pseudonym and the line number of the transcription. The audio recorded interviews were transcribed by the researcher. After each interview, notes were taken to record the researcher's thoughts, initial interpretations and potential biases (Appendix 24). Emerging thoughts, ideas and descriptions were separated into meaning units (Appendix 25). These meaning units were clustered and the data re-examined (Appendix 26). The post-interview notes were constantly referred to when analysing the data and provided an opportunity to work towards making participants' experiences and assumptions explicit. This could provide an

opportunity to gain potentially new insights into the phenomenon under investigation. An interest in seeing how the return to work intervention might develop, how it might function and how it could be viewed as valid was maintained throughout the analysis. The focus of the analysis in the second stage of the study was on experiences that related to the return to work, rather than experiences of the injury. Bridling was used to stop pre-understandings from having an uncontrolled effect on the evolving understanding of the phenomenon in question. New meanings that appeared to emerge were not taken for granted but were re-examined in relation to the transcribed interviews. It was essential not to make definite what was indefinite for as long as possible (Appendix 27).

7.8 Summary

The development of the return to work intervention was based on the findings of the first stage of this study. A lifeworld-led approach was used to underpin the development of the return to work intervention in an attempt to make the intervention appropriate and relevant to the needs of the individuals. The intervention is made up of two phases; the first phase is an information sheet (Appendix 15) that has been devised to enable patients to start thinking about the realities of getting back to work and is to be used as a means of discussing the potential return to work with the occupational therapist. The second phase of the intervention, the return to work plan (Appendix 16) is the writing of a return to work letter by the hand therapists with the participant. This collaborative process was used as an opportunity to include information about any proposed modifications to the work place, information for the line manager about the expected time scale for healing of the injury and also measures to ensure that the participant would be able to participate in their rehabilitation programme. The next chapter will examine the findings and discuss their significance in relation to the literature.

Chapter 8: Findings and discussion of Stage 2 of the study

8.1 Introduction

The findings reported in this chapter focus upon seven participants' experiences of returning to work following a traumatic hand injury. These seven participants were newly recruited to this stage of the study and differed from the participants from the first stage of the study. All participants followed the usual post-operative hand therapy regime to suit their injuries but for the second stage of this study the return to work intervention was incorporated into their rehabilitation programme. Participants were interviewed on one occasion between eight and thirteen weeks after they had returned to work. The aim of this second stage of the study was to explore the return to work experiences of individuals while using the newly developed return to work intervention.

8.2 Participant details

The following seven pen portraits describe the participants' work and give brief details about how they damaged their hand. For the purposes of confidentiality names of all participants have been changed.

Mohammed's story: 'Mohammed' is a right handed man in his late twenties who works full time in retail. He underwent wrist replacement surgery on his right dominant wrist. He had injured his wrist several years previously but had neglected to seek medical attention at the time as he was unaware of the seriousness of his injury. He is married with young children and is involved in sporting activities such as playing football.

Ana's story: Ana is a right handed healthcare worker in her late thirties who lacerated extrinsic flexor tendons to her left hand when she slipped whilst removing an avocado stone with a knife when cooking at home. She underwent surgery and opted to return to work immediately following her surgery but rearranged her usual daily tasks to allow her to work but at a reduced capacity.

George's story: George is a healthcare worker in his mid thirties who fractured his right dominant index finger on a rope while sailing. He underwent a surgical fixation in November 2012. He took ten weeks off work in all due to the fact that he was not allowed to wear a splint when working on medical wards.

Daniele's story: Daniele is an office worker in her late forties who sustained a fracture to her left index finger following a fall. She underwent a surgical repair one month after her initial injury due to a surgical decision. Due to the busy nature of her work her return to work was sporadic and she would get to her office whenever she could between therapy sessions and surgery.

Gemma's story: Gemma is a civil servant in her mid sixties who had a bone removed from her left wrist in October 2012. Her job comprises a mixture of office and community based work. She opted to return to work immediately following her surgery.

Cath's story: Cath is a right handed office worker in her late forties who sustained fractures to her right ring and little finger. She tripped and fell from the pavement into the path of an on-coming car that drove over her right hand. She initially took six weeks off work as she needed to have complex surgery.

James' story: James works in manufacturing and is in his late thirties. He cut a tendon to his left non-dominant thumb while at work. He took two days off work to have surgery and then returned to work and arranged to do light duties only as his manager was keen for him to return to work as soon as possible. James went back to work and only took two days off in all as he would not have been paid for any other time lost.

A summary of the participant characteristics are given in Table 8.1

Table 8.1: Participants involved in return to work pilot

Participant	Gender	Age	Injury sustained	Type of work
1 'Mohammed'	Male	25-30	Wrist replacement	Retail
2 'Ana'	Female	35-40	Extrinsic flexor tendons, zone II and radial digital nerve –left	Healthcare
3 'George'	Male	30-35	Fracture and Extensor tendon zone III	Healthcare
4 'Daniele'	Female	45-50	Fracture left middle finger	Office worker
5 'Gemma'	Female	60-65	Trapeziectomy	Civil servant
6 'Cath'	Female	45-50	Crush injury right little and ring finger.	Office based
7 'James'	Male	25-30	Extrinsic extensor tendon	Manufacturing

The aim of the second stage of the study was to examine the return to work experiences of seven participants who piloted the return to work intervention developed from the findings of the first stage of the study. Participants described the sequence of events that led to their decision to return to work. The reality of the interview process and the anticipated timing of the administration of the return to work intervention differed from how it had been planned. Only three of the participants had the second phase of the return to work intervention written prior to their return to work. The realities of the working and life commitments of the remaining four participants meant that they had opted to return to work within two weeks. Table 8.2 shows the timing of events for each participant. This was similar to those participants in the first stage of the study. The first phase of the return to work intervention (Appendix 15) was issued to participants and in the case of Mohammed caused him to delay his return to work by two weeks when he gained insights into what it might be like returning to work with a healing hand and realised that taking

some time off in the early stages of his recovery was an option for him. 'Cath' co-wrote three return to work letters in all over a period of ten weeks. The participant felt that these were required as a means of keeping her work place informed of the need for her to continue with work modifications for longer than originally anticipated. In addition, once she returned to work, she realised the implications of being back at work and recognised the extra level of support she required. The semi-structured interviews were carried out from eight to thirteen weeks after the injury.

Table 8.2: Time schedule for return to work pilot.

Participant	Operation date	Recruited	Letter written	Interview date	Time taken off work
1 'Mohammed'	05/11/12	19/11/12	19/12/12	7/2/13	Two weeks
2 'Ana'	21/10/12	3/11/12	16/11/12	10/2/13	One day
3 'George'	29/10/12	7/11/12	22/11/12	11/1/13	Ten weeks
4 'Daniele'	7/11/12	15/11/12	27/11/12	16/1/13	Four weeks
5 'Gemma'	12/10/12	7/11/12	21/11/12	30/1/13	One day
6 'Cath'	13/11/12	26/11/12	18/12/12*	13/2/13	Six weeks
7 'James'	12/10/12	19/10/12	2/11/12	2/1/13	One day

** 'Cath' had three return to work letters written with her in all*

8.3 Development of themes from second stage of the study

Each participant was interviewed on one occasion when they had returned to work. All interviews were transcribed by the researcher and analysis was done as described in section 7.7. Participants in the second stage of the study were interviewed on only one occasion, after they had returned to work. Two themes that were developed were explicitly concerning the participants' experiences of returning to work. Other potential themes emerged that also reflected findings from stage one of the study (naivety, 'it's only a finger', expectations etc). The focus of the analysis

in the second stage of the study was on experiences that related to the return to work, rather than experiences of the injury.

Two themes emerged from the analysis of the interviews; examples of how the analysis produced these themes are in Appendix 24 -27. The two themes were 'being believed and understood' and 'gaining influence'. These themes are described in detail in section 8.3.1 and 8.3.2.

8.3.1 Stage two, theme one: 'being believed and understood'

Prior to Cath's return to work she contacted her manager to let him know that she had been injured. Cath was also keen to visit her work place to show them that she was injured, that the injury was real, so that her co-workers were not underestimating the significance of the injury or the impact that her injury was having on her:

***Cath**: "I spoke to them on the phone and after about two weeks I went in there to see them…so they could see how injured I was… I think it is important for them to see how the injury looks like and how you cope with it and for them to understand that you are not sitting at home eating chocolate…often with an injury of your hand you can walk and you can talk and be outside but people don't really think that you can be injured but if it's your leg or your back they can see it immediately."* **36-44.**

Cath emphasised the point that going into work was a useful way of ensuring her colleagues and manager could physically see the injury which she felt helped them to understand the fact that she was injured and as a result working below par:

***Interviewer**: "So going in has been helpful?"*
***Cath**: "And also I have never been shy of showing them how it looks but I also have to say it's not very nice to look at so if you are squeamish or feel you can't look at things don't because some people especially when they saw the k-wire they almost fainted."* **117-121.**

Daniele went to work directly after sustaining her injury, although she reported that this was mainly due to the fact that she did not realise the significance of her injury. It provided an opportunity for her manager and colleagues see that she was injured and needed medical attention:

Interviewer: *When did you first go back to work after your injury?"*
Daniele*: "Well I actually went (to work) the day I did it, and I realised as the day went on the fingers were becoming increasingly swollen…So I spoke to my finance director and he said I think you better see somebody and I saw a nurse, so I went down and he said I'd usually splint it but you need to get your rings cut off your hand and it's a bigger job than I would deal with here and so I came to hospital that day."****10-14.***

Daniele went to hospital for a review and had to wait a month for her surgery while the oedema settled and during that time she occasionally went back to work:

Daniele: "…*I think I made them realise in the office, even though my hand was in a sling they realised…I don't think anyone appreciates until you've got it like that. My MD was pretty sympathetic because he had broken his leg playing rugby but he was off for three months …breaking a leg is a bit more obvious but I think you realise*…"
72-75.

When her manager saw that her hand was injured and that she could not function to her usual level, he understood that she would need further time to recuperate.

Gemma reported that the use of the second phase of the return to work intervention proved a useful means of getting her manager to understand the potential impact of her surgery:

Gemma*: "Yes I think my boss understood more once he got it and read it."*
Interviewer*: "Not that he was giving you any hassle…"*
Gemma*: "No it's just sort of attitudinal."****75-78.***

Gemma reported that such an attitude helped her to feel that it was alright to be functioning below par when still recovering from her surgery and helped her to let

her colleagues know that she was not functioning to her usual level. It also helped them to understand that her injury could have impacted on her ability to do her job to her usual level:

Gemma**: "Well I had the letter which explained to him that it would take some time but I don't think people realised that because … I was being teased yesterday about sexism because I wasn't carrying some equipment out to the car I asked one of the men if he would do it and he said that was very sexist. I didn't start a row but I thought I'd have to have a little word with him and remind him that I didn't have the strength to do it."* ***89-95.

Mohammed's expectations about his return to work were linked to what he thought his manager would want. He found the first phase of the return to work intervention provided an opportunity to gain a sense of what impact the injury might have on his ability to work:

***Mohammed**: "Originally I thought I'd be off for a few weeks maximum but obviously when I came in I spoke to you guys you told me about my options what I can and cannot do. My options, which weren't clear to me beforehand, became much more clear after talking to you guys. The only reason I was thinking about going back to work was because I thought I was going to get into trouble or just for the fact that they may have thought that I was taking the mick. That's the reason, it's not that I felt comfortable at work it's just that I didn't want to risk it. Obviously listening to you guys helped a lot. You wrote a letter which I gave to my employers and they looked at it and they were quite happy about it as well. It kind of relieved the pressure in that I had to try and explain everything to them but it was already written – like a backup sort of thing."*
***Interviewer**: "It came from someone else?"*
***Mohammed:** "Exactly so they can see that I'm not just messing around, trying to get extra time of work and that helped a lot. It was just that mental kind of back up where I knew if anything was to go wrong, if anyone was to blame me you guys were there to back me up."* **32-51.**

The need to feel understood by colleagues and manager was paramount for Mohammed. He did not know that it was possible for him to take sick leave after his very serious surgery but once he made his decision to take time off, he described that his manager was happy for him to do this. The return to work intervention meant that he was able to focus on his rehabilitation programme and it helped him to decide to take two weeks off work immediately after his operation. He was also concerned about what his colleagues would think about the fact that he was taking time off work. He reported that his colleagues and manager were supportive and in reality his perceived concerns about what he believed his colleagues thought about him were groundless. Speaking with his occupational therapist gave him the conifidence to help him with this transition.

Due to the nature of George's job, working as a healthcare professional on a hospital ward he was unable to return to work for ten weeks. His job involves transferring patients and doing a lot of physical work so and he had been told by his surgeon that it may take around six weeks for his fracture to recover. He had told his work place that this would be the case but the injury took longer to heal so he took ten weeks off work instead. He reported that his colleagues found it difficult to understand why he was not returning to work:

George: *"There are always people at work who give you a bit of a ribbing for it (being off work) and your boss asking, 'well what's actually happening?' probably because they thought it was going to be six weeks and then it became ten."*
Interviewer: *"What comments did you get from your colleagues?"*
George: *"'Why don't you come back on light duties?' or 'What can you do?'*
Interviewer: *"How did you feel when they said that to you?"*
George: *"Oh I suppose it's character building (laughs) you have to roll with the punches but ...to start with it felt a bit crappy because you feel as if you don't have a leg to stand on for having time off." It's better now since I've been back for two weeks."* ***16-25.***

George found it difficult being off work. He was aware that his colleagues were busy and they even questioned his decision to take time off work but felt the letter was useful. The second phase of the return to work intervention helped him not to be

intimidated when he spoke with his boss about his needs and the letter brought in the expert's voice, that of the occupational therapist, into the conversation.

8.3.2 Stage two, theme two: 'gaining influence'

Many participants reported that there was a need to feel understood by their work colleagues and managers, that their injury was real and that their ability to do their usual work tasks was indeed impaired. It seemed to be important for participants to have a sense of influence once back at work.

Ana reported that her manager and colleagues were supportive and flexible when she first went back to work. The return to work letter, the second phase of the return to work intervention, was accepted without question by her manager.

Ana: *"Yeah they were fine… they could see…I didn't take any time off work because I didn't see the need to…it was my left hand not my right hand, my writing hand. I think where I work they are very accommodating and other people have injuries and various surgeries so they understand the length of time it takes to heal. In terms of pressure to get things done…not really…most of it is report writing and lots of it is face to face with school staff."****42-48.***

Ana added that if she had taken any time off work, the return to work plan may have proved more useful as a means to inform her Human Resources Department about the nature of her injury and the need for her to modify her usual working activities. The return to work letter could be used to provide information to satisfy the bureaucratic processes of the Human Resources Department:

Ana*: "Obviously my team is the way they are, HR is another department and the rest of the organisation is different so if I had taken time off that would have been more bureaucratic so then the letter would have been very helpful in that sense just to have the evidence, for their understanding and if it's …for example if I had damaged a tendon again and it's for my work I didn't take any sick leave or anything like that but I could see the potential for that to happen".****114-120****.*

The ability to influence colleagues and managers with the use of the return to work intervention was highlighted by Daniele as well. She had been signed off work by her GP for six weeks and as this time was nearly up she wanted to begin to get back to her usual routine and get back to work:

***Daniele**: "I did a graduated thing for two weeks to get back to work and actually I was coming in here(hand therapy department) a fair bit as well for exercise and stuff like that…I travelled outside rush hour basically."*
***Interviewer**: "So the letter was read and…"*
***Daniele**: "It had got to the point where I couldn't be signed off any more by the hospital, I'd have to see my doctor but by writing a letter to the company that covers me being able to go in but that I wouldn't be able to lift stuff and I shouldn't travel."* ***63-70**.*

The return to work letter provided an opportunity to discuss the implications of getting back to work in conjunction with her colleagues and manager. Cath also viewed the return to work letter as a means of managing any bureaucratic concerns:

***Interviewer:** "So you had a letter from the OTs?"*
Cath**: "That was very good for personnel to have because...for insurance and also for them to know that you are coming back and that you are restricted in what you can do and that you can't be full speed for long."**48-51.

The written return to work plan allowed Daniele the opportunity to initially modify her work duties by altering her hours and work at a reduced level. She reported that the letter she received from the occupational therapy department gave her manager some insight into the healing processes of her injury and how it would impact on her day to day activities and satisfied the Human Resources Departments requirements. She reported that her manager was happy for her to be back at work using the terms laid out by the return to work letter and her interpretation of it. Daniele felt that the letter allowed her colleagues to understand more fully the reality of her injury and the impact it was having on her life:

***Daniele**: "I had all different sorts of splints people trying to hold my hand together so in the office they didn't know what was going on I didn't know what was going on*

but that's understandable because no one knew what was going on. But it was much better when you had something structured to say that I would have surgery and that it would get better as long as it works as you can't say for sure if it will." ***86-96****.*

Daniele reported that the return to work letter provided a plan that would help her and her manager to make sense of the injury and how best to manage the rehabilitation of her injured hand. Once she got a sense of the injury and what she could and could not do, she went back to work. Due to the nature of her job she would often work from home to keep up with targets. She was happy to do this and felt that the letter offered an opportunity for her manager to understand the nature of her injury and this allowed her to feel able to work in a modified fashion. She felt able to ask to alter her working hours so she could travel outside the rush hour for example.

George found it difficult being off work. He was aware that his colleagues were busy and they even questioned his decision to take time off work but felt the letter was useful:

George*: "Yeah, my line manager changed part way through but at the time she was quite pleased with that. She read it and put it in the folder and she made that the basis for risk assessments … she liked the letter because everything is written down there is no chance to forget things, you don't feel intimidated going talking to your boss you don't forget things when you sit and talk to them and it's written there from an expert perspective. People don't understand the impact of the injury you get the impression that every thinks you're having a great time sitting about not doing anything."* ***26-37****.*

George felt the letter gave him a good discussion point as it helped him when he needed to extend the expected time for his injury to heal. His manager and colleagues were keen to get him back on the ward as they were under pressure. George reported that he felt able to stand up to his manager due to the letter that was written. The letter gave an independent view about the progress of his injury. The nature of the job dictated the return to work time – ten weeks in all. George

reported that his manager appeared to be happy with the return to work letter and decided to use it as a basis for a risk assessment.

Cath reported that the letter helped her to arrange her phased return to work and gave her the strength to keep to her plan even though her immediate line manager found it difficult to understand why she needed to leave work after a half a day. Cath felt that this may be due to the fact that it may have been hard for her line manager to understand her difficulties as Cath appeared fit and well. In addition her line manager was under pressure to get work done so she would rather if Cath stayed at work for the full day and helped clear the back log of work. This put Cath under pressure to change her return to work plan but she felt able to stick to her plan and leave after half a day. She reported that she was pleased that she had gone back to work:

***Cath**: "… it has gone well I am pleased and that's why I want to continue (with reduced hours) for going back full time as of next week I don't think would be possible. I don't think I could do it. Even if I can mentally do it I don't think my hand is up to it."*
***Interviewer**: "So we've written a second letter and now a third.*
***Cath**: "That has been useful. It gives me power but also shows that you in the hospital understand your patient's needs: a slow return to work and that you don't want to ruin the work you have done on the hand for just saying 'oh you can go back to work and you'll be fine and then I come back (to therapy) in two weeks' time and I'd be further back." **78-99**.*

Cath felt that the letter she helped write, allowed her to feel more in control of her return to work plan. A second and third letter was written with the hand therapy department to communicate her on-going needs to her line manager. She was asked how she felt the return to work process would have gone if she did not have such a plan:

***Cath**: "If I had gone back who knows I might not have been back for more than a week and then I would have been back here and said 'I can't do it' and then I would have been off again for another month and it's better to be off part time maybe for a longer time but when you actually comeback full time you are back."*

***Interviewer**: "Do you think it's helpful that work have a formal plan about returning to work?"*

***Cath**: "They do need to know one, what kind of accident you had and two, what kind of treatment you had and that you are still having and how long you in the hospital think it is going to take. And that you are in the plan it's not that you are just signing me off for another month part time and I'm again sitting at home and eating chocolate. I'm actually coming here some weeks three times a week to have treatments an in between when I come home from work I do very hard exercises and I'm also very tired." **101-110**.*

Daniele reported that the return to work letter provided a plan that would help her and her manager to make sense of the injury and how best to manage the rehabilitation of her injured hand. Once she got a sense of the injury and what she could and could not do, she went back to work. Due to the nature of her job she would often work from home to keep up with targets. She was happy to do this and felt that the letter offered an opportunity for her manager to understand the nature of her injury and this allowed her to feel able to work in a modified fashion. She felt able to ask to alter her working hours so she could travel outside the rush hour for example:

Daniele**: "No, the only thing is that sometimes it was hurting, it was taking much longer to get ready to go to work , get to work and do stuff but they seemed to accept after I put the letter in that I was ten minutes late it wasn't because I hadn't tried to get in because I think that's a big thing, sometimes the bus would be so crowded I would think, ' I'm not getting on there and I can't afford to get a taxi to work every day'." **126-130.

The return to work plan allowed Daniele to be at work but working at a reduced capacity. She reported that her peers and line manager appeared to be happy for her to work at a reduced capacity in the short term. She reported that she felt happy about being back at work but working at a reduced level. She felt more in control of her ability to manage her rehabilitation programme while getting on with her daily activities.

8.4 Summary of the findings of the second stage of the study

Participants described the focus upon getting back to work while managing their rehabilitation programme as an outpatient in the occupational therapy department. Participants often returned to work very soon after they had sustained their injury or had surgery. The reasons were varied and often were not linked to the impact that their injury would have on their ability to do the job. Participants reported the need to feel believed about the nature of their injury and often went into their place of work so colleagues could see the injury and help them realise that it may impact on their ability to do their job. Uncertainty about their ability to keep their job if they took time off work was considered and played a part in their decision making process. Their company's sick-leave regulations also had an impact on choices that participants made concerning their return to work. A strong work ethic accompanied by a lack of insight into the impact that their healing hand would have on their day-to-day activities were cited as reasons for going back to work while the injury was still healing. These were similar reasons to the findings from the first stage of the study (section 5.4).

Differences reported by participants in the second stage of the study were that use of the return to work intervention afforded an opportunity to get back to work in a more planned and controlled manner. For example, the intervention was used by participants to manage their company's sick leave policy. Often the participants' immediate line manager and colleagues were happy to support a modified return to work but the return to work letter was accepted as a formal return to work plan if this was needed by their Human Resources Department. The detail and focus of the return to work plan was reported by Daniele as providing the information that such departments required to facilitate the return to work of the participant.

Some participants used the return to work intervention as an opportunity to delay their actual return to work. Discussing what being back at work would be like while talking through the first phase of the return to work intervention with their occupational therapists helped them to think about the implications and realities of what being back at work might mean. This discussion provided an opportunity to contemplate the practicalities of being back at work in a planned manner with the help of an occupational therapist. The realisation of what being back at work would

mean and the impact having an injury would have, helped them to make a decision about what form their potential return to work might take. In addition, participants in conjunction with the occupational therapists devised a return to work plan in the form of a return to work letter to be given to the participants' manager or Human Resources Department. The plan was used to provide an opportunity to enable the participant to return to work but take into to account the healing nature of their hand injury. For example one participant opted to come late to work to miss the rush hour, this measure helped her to keep her repairing injury safe while returning to work. All participants who received a return to work letter gave the letter to their manager or Human Resources Department. It was not certain how the return to work letters were used but participants reported that some managers followed the return to work plan as written in the letter, others appeared to accept the letter but not read it. It was reported that the managers who did not read the letter but accepted the participant's verbal description of the plan did follow the return to work plan as described by the participant.

The option of writing more than one letter was used with one participant. In that case three return to work letters were written in all, with about one month between each letter. It was felt by the participant that they were needed as a means of providing on going updates about her progress for her manager. The letters were used to modify the return to work plan, in her case by extending the projected healing time. This was possible as the participant had been encouraged to discuss her return to work experience with her occupational therapist in a manner that meant that it was meaningful and it was used as an integral part of the rehabilitation process. An invitation for managers and Human Resources Departments to make contact with the occupational therapy department was included with each return to work letter that was written but this was not taken up and no contact was made at any time from any of the participants' workplaces.

The return to work intervention was sometimes not initiated until the participant had already returned to work. This was due to the fact that sometimes participants were not recruited in time or the referral to the occupational therapy department was not actioned in time to review them before they opted to return to work. Although the participants were recruited at the time that was planned in the methods section, often the individual had already returned to work. The intervention was still deemed to be useful by the participants as it afforded them an opportunity to structure how they were able to manage being back at work while their hand was still healing.

Participants reported that even though they were back at work the letter still provided an opportunity to influence their time while at work. One example of this was that the development of the return to work plan allowed participants to attend their outpatient rehabilitation sessions when required. Sometimes it was reported by participants that their manager or colleagues would forget that they were still managing a recovering hand injury and ask them to do a work task that they had previously agreed was still not appropriate for them to be doing. If this occurred the participants reported that they felt empowered to remind them that they were still working below par and needed more time to protect the surgical repair. Once back at work, it was reported that some managers were happy if the participant was present at work even if they were working below par as opposed to taking sick leave and being absent from the workplace.

Participants reported that getting back to work proved difficult whether they worked in office jobs or manual jobs. Differences appeared to sometimes depend upon whether there was sick pay available or not which could affect decisions made about returning to work or not. The inclusion of an estimated amount of time it would take for the repaired structure to heal and allow the participant to get back to work was considered important. The fact that participants had some sense of how long the process might take appeared to provide a safety net for the participant and the workplace. The level of interruption was finite for both parties although longer than expected.

8.5 Discussion of the findings of the second stage of the study

8.5.1 Introduction

This section examines the findings from the use of the return to work intervention in relation to current literature regarding the ability to return to work following a traumatic hand injury, acknowledging that being present at work should not be viewed as necessarily indicating a successful return to work. Seven participants were recruited who had sustained traumatic hand injuries and aimed to return to work. How participants adapted to their return to work will be discussed and how the workplace was involved in this process. How the return to work intervention became an integral part of the rehabilitation programme will be explored. The central role of the participant in the development and use of the return to work intervention is

discussed and that being back at work should not be viewed as an indicator of a successful return to work.

8.5.2 The role of the occupational therapist in the return to work process

The researcher explained to the occupational therapists their role in the implementation of the return to work intervention. In reality the occupational therapists found it difficult to know how to use the information sheet. The occupational therapists gave the information sheet to the participants but did not always talk through its contents or use it as a method of discussing the return to work concerns of the participants. A more formal training component, allied with a more detailed information sheet would have been useful for the occupational therapists. In addition if examples of a return to work letter were written in the form of a template they may have proved to be a useful guide for occupational therapists The return to work intervention was devised using insights gained from the lifeworld to ensure that the intervention was based on participants' needs, values and insights (Todres *et al*, 2007). In addition the need to view returning patients to work as an integral part of the rehabilitation programme for this patient group was highlighted. This would necessitate an expansion of the rehabilitation programme to include not only hand therapy but also wider occupational therapy goals. Hand therapy tends to focus upon the medical concerns but occupational therapy aims to reflect the concerns of the patients and their lifeworld. Butterworth (2008) cited the need to provide information and advice to patients throughout their treatment. The role of the occupational therapist in this case would be pivotal in including patients' return to work needs in their rehabilitation interventions. Insights gained from the first stage of the study could provide treating therapists with understandings that may enable them to anticipate potential pitfalls that their patients may encounter during their rehabilitation process. This may go some way to provide a method for patients to manage both their hand therapy programme and their return to work at the same time. For example, participants in the first stage of the study reported that they were aware that their surgical repair would not allow them to resume usual function once their splint was removed as the repaired structure was still too weak to cope with such a level of activity. Many opted to wear the splint at work as it felt more secure but reported that they felt a point of crisis as they became concerned that perhaps this might indicate that they were not progressing as they had expected.

Feedback from the occupational therapists concerning the writing of the second phase of the return to work intervention included concerns about whether it was within their remit to devise a return to work intervention. It was considered at the time that patients appeared to be returning to work regardless of whether there was a return to work plan in place or not and that occupational therapists are well placed to blend vocational needs with health needs (Frank and Thurgood, 2006; Townsend and Polatajko, 2013). A more involved training component may be required that examines how an occupational therapist can not simply focus on the rehabilitation of the repairing structure but to consider wider implications of the injury and how it might impact on the individual's day-to-day life (section 1.7).

There are many ways that patients' perspectives could be incorporated into rehabilitation programmes. For example using the findings of the longitudinal component of the first stage of this study can demonstrate to therapists the type of questions they may need to include in their rehabilitation interventions and information they may need to give to their patients at various points on their journey back into work. This can provide a means of supplying information to hand injured patients at timely and useful points on their rehabilitation journey. Occupational therapists too would have to become familiar with such insights to enable them to draw on the occupational therapy process of focusing upon the client-centred needs to allow individuals to participate in occupational activities (Reed and Sanderson, 1999, Townsend and Polatajko, 2013). Currently, the role of hand therapy has been developed to manage the medical concerns following a traumatic hand injury (British Association of Hand Therapists, 2014) and the role has not been structured to allow an opportunity for hand therapists to take on the concerns of the individual when developing rehabilitation interventions. This study has demonstrated that it is possible, by using occupational therapy approaches (Townsend and Polatajko, 2013) to include patients' concerns in rehabilitation interventions by ensuring that they are lifeworld-led (Todres *et al*, 2007).

There was a difference in the timing of when participants returned to work and when occupational therapists expected them to return to work. Post-operative guidelines focus upon the healing time of the repaired structure and exercise programmes are linked to this (Appendix 5). This study highlighted that there is a difference between participants' return to work planning and occupational therapists' return to work planning. Such lack of coordination has highlighted the need for occupational

therapists to adapt their treatment interventions to take into account the work needs of their patients.

8.5.3 Acceptance and understanding of the hand injury

Participants found it difficult to accept that their hand injury would be viewed as being serious enough by colleagues and managers to warrant any time being taken off from work (section 8.3.1). As has already been discussed in the first stage of this study (section 5.5.1 and 5.4.1), many participants found this difficult to accept themselves. This may be due to the fact that minor hand injuries are common place and usually heal quickly and with minimal upheaval or need for medical intervention. Once it became clear that the injury was more serious and needed a surgical intervention, uncertainty about how it would be possible to manage usual day-to-day activities emerged. The second stage of the study is different from the first in the tone of the language used by participants. Five participants in the second stage of the study went into their work place to show colleagues their injury. Those participants who did this, reported that they hoped that others would understand that the injury was real and not trivial. Participants reported that they wanted their colleagues and managers to understand that they would not be able to function as before. It is possible that having others witness the injury may help the participant and their wider social network adapt to the realities of the injury. Participants in the second stage of the study reported that they felt happier to speak with their line managers and colleagues about their injury and the impact it was having on their ability to work.

Until the individual shows their wider network (family, work, friends) the hand injury, the injury is maybe seen as separated from themselves (i.e. the participant plus injury). Once this happens, others can integrate seeing the person and their injured hand as a new integrated reality of the 'injured person'. This may be an important step in the adaptation process and may help the individual on their emotional journey through the process of their new reality being reflected in the eyes, words and actions of others. Warchal and Metzger (2005) argue that an individual moves back and forth between emotional states many times during their recovery in response to their experiences and this was reflected in this study. Where work colleagues and managers see the injury, it may go some way in helping them gain a sense of the new reality of the injured person and may allow the injured person to be

acknowledged as being injured. Adaptation literature concentrates on the adaptation process for the individual. Gustafsson *et al* (2002) described various coping strategies hand injured individuals may exhibit directly after sustaining their injury (section 2.5). The coping strategies described techniques individuals used to help manage day-to-day activities but are not the same as adapting to the injury and their new circumstances. The adaptive process of participants viewed in this study concentrated more on how individuals accepted the 'new hand' in relation to their ability to engage in their daily activities. This acceptance emerged as participants gained experience by using their 'new hand' over time which provided an opportunity for them to gain a sense of its potential and constraints.

The responses from participants in stage one of this study concerning their return to work process differed from those in the second stage of the study. In the first stage of the study, participants often reported being dissatisfied with the return to work process and often cited a lack of control in their ability to manage their return to work in a satisfactory manner (section 5.6). In the second stage, there was a noted absence of this dissatisfaction. Participants' expectations appeared to be better managed and they reported that use of the information sheet and the return to work plan provided an opportunity for them to play a more active role in their return to work (section 8.3). Participants reported that discussing the return to work process in a more specific way helped them understand potential pitfalls of being back at work. The return to work intervention used in this study reflects aspects of such interventions used in Australia and the USA and this study has shown that it is possible to use such an intervention in a United Kingdom setting.

8.5.4 Occupational therapy intervention

The focus on the return to work intervention by the occupational therapists changed the context in which the participants found themselves. Hand therapists focused upon medical concerns and the need for participants to comply with their exercise programme. If participants returned to work, the main concern was still their continued participation in their exercise programme and maintenance of the surgical repair (Bruyns *et al*, 2003). A focus on the participants' lifeworld in the first stage of the study afforded an opportunity to gain insights into the complexities of participants' lives and the adaptation journey they were undertaking. Meanings that were forthcoming have allowed for new and deeper understandings of the

experiences of the participants in this study. Many of the insights reflected on the fact that it was how the participant was attempting to manage social interactions that caused many difficulties (section 5.4.1; 5.6.2). These insights demonstrated that there is a role for the inclusion of an occupational therapy perspective when providing interventions in a hand therapy setting.

The return to work intervention provided an opportunity to expand the focus of both the participant and the occupational therapist to include medical concerns *as well as* return to work needs. The first phase of the return to work intervention, the information sheet (Appendix 15) was introduced to provide an opportunity for the participant and therapist to consider a wide range of potential aspects of returning to work and to think in detail about the specific work needs of the individual and how they might integrate treatment needs with their work needs. The return to work process provides a practical application of how to include patient concerns in the development of their rehabilitation interventions (Hannah, 2011; Steward, 2004).

The participant is viewed as an expert in their life and their work and the expertise of the occupational therapist is in breaking down the required tasks in the context of the rehabilitation programme. The return to work letter with its recommendations, is the end product of the two areas of expertise coming together. For example Cath felt that if there were not time restrictions put on her working hours she would have felt pressurised to stay until the deadlines of her work were completed which usually meant doing many hours of overtime. Baril *et al* (2003) in their Canadian study described the need to include healthcare professionals' perspectives when devising return to work interventions. This study demonstrated what Joss (2002) advocated, that there can be a role for occupational therapists working in acute medical care in the United Kingdom to include patient needs when developing rehabilitation interventions. An example of such modifications was where the occupational therapist made the recommendation that Cath should in the first instance, only work mornings for the first two weeks of being back at work. This action served to support her return to work as well as maintain the surgical structure. This enabled the occupational therapist to fulfil their professional obligations while enabling the participant to fulfil hers.

The participants all shared their co-written return to work letters with their line manager or Human Resources Departments. This suggests that it was viewed as being useful by the participants. The inclusion of the occupational therapist's

perspective provided an opportunity to allow the manager and the patient to implement the return to work plan. The letter confirms the need for modification to support the healing process. The remaining issue, of how to implement any modifications, is intimated in the letter but can be finalised by the participant and the workplace.

The findings from the first stage of the study demonstrated that there is an inherent power imbalance between the manager and the employee which may impact on their ability to negotiate an appropriate return to work plan. The involvement from the occupational therapist at this stage may go some way to bridge this gap and enable a context in which this negotiation can take place in a way that may be more productive.

However there may be challenges to occupational therapists taking on such a role as discussed by Coole *et al* (2013) who reported that occupational therapists working with adults with musculoskeletal conditions were uncomfortable taking the lead in the development and implementation of vocational rehabilitation programmes. Concerns were raised about the possible legal implications of taking on this role. In addition the occupational therapists in that study reported that they felt the need for further training to support them. Similarly the occupational therapists involved in the second stage of this study, also reported that they felt unsure how best to approach the writing of the return to work letter. This perceived lack of confidence may be rooted in what Joss (2002) referred to when he described that occupational therapy hospital care in the NHS has mainly focussed on acute rather than on rehabilitation services. Joss (2002) argued that, as a result, occupational therapists may have lost the focus that enables them to implement such services. In the United Kingdom, acute hospital care does not provide the legal requirement or infrastructure to support the vocational rehabilitation role. The occupational therapists had an opportunity to discuss any queries they had in devising the return to work plan with the researcher. The queries were noted by the researcher and the main areas where they sought clarification were concerning the amount of detail about the injury and uncertainties about their perceived authority to write a return to work plan that made recommendations about taking time off work for example. The researcher was working to help the occupational therapists gain confidence in asserting their clinical recommendations in writing for non NHS staff and non NHS organisations. Prior to this intervention, the occupational therapists' recommendations were confined to a verbal format or written in-house notes. The

fact that they were now making external recommendations required a shift in how they viewed their clinical authority. In order to minimise researcher bias, the researcher did not influence clinical recommendations. The focus was kept to the practicalities of writing a return to work plan. In order to ensure that this type of intervention would be successfully taken up in occupational therapy departments, a training component would need to be considered. In this study, although a level of training and support was offered to the treating occupational therapists, it became clear as the intervention progressed that a more detailed training component would have proved beneficial. It is likely that with further experience the occupational therapists' confidence would grow.

Occupational therapists involved in the return to work intervention pilot asked about any possible legal implications about writing and issuing the intervention. A similar concern was raised by occupational therapists when surveyed about the possibility of supporting individuals with musculoskeletal conditions to get back to work (Coole *et al*, 2013). The Allied Health Professions Advisory Fitness for Work Report (AHP – AFWR) has been developed by the College of Occupational Therapists, the Chartered Society of Physiotherapists and the Society of Chiropodists. The aim of the AHP – AFWR has been highlighted by the College of Occupational Therapists:

*"This advisory assessment report will identify how occupational therapists can help someone overcome physical and mental difficulties to return to a productive working life. This will help reduce the costs of sickness absence, support employers and, importantly, improve the health and wellbeing of the working population." (*College of Occupational Therapists*,* 2013*)*

The AHP- AFWR cannot be used as a means of providing evidence for patients to claim state benefits.

Occupational therapists in Coole ***et al***'s study (2013) also reported that they felt they would lack the time to incorporate vocational rehabilitation programmes into their usual treatment plans while working with adults with musculoskeletal conditions. An awareness of such time pressures was an influential factor when the return to work intervention for this study was being developed. The pilot study demonstrated that it could be potentially useful and possible to implement the return to work intervention within the constraints of working in a busy outpatient setting. Occupational therapists

raised concerns in the study by Coole et al (2013) about the type of information they could write in the AHP- AFWR, but the College of Occupational Therapists (COT, 2010) state that as long as the detail of such letters is concerning the rehabilitation of the individual it is acceptable for occupational therapists to issue them. Such letters should not be used as a means of enabling participants to access state benefits for example, this would still require the individual's GP to sanction such a request. As a consequence, a copy of the return to work plan could be sent to the GP and could be used to provide a rehabilitative perspective to assist the GP in making decisions about care. In fact McCarthy (2011) and Welsh *et al* (2012) cited the difficulty that they had as GPs in making such decisions due to lack of insight into their patients' rehabilitation needs. This part of the return to work intervention could give them such an insight and could go some way to strengthen the relevance of the return to work intervention.

This study demonstrated that it is possible to provide an intervention that provides a focus upon individuals' return to work needs in a way that did not significantly interfere with the usual rehabilitation intervention period for this patient group. As described the use of the return to work intervention sheet (Appendix 15) can also be used as a discussion point to help both the therapist and participant think about the realities of being back at work and how the injury may impact upon this. The use of a return to work letter could be more easily incorporated into rehabilitation interventions with the use of templates to act as prompts. It is expected that it would not take much more time than the usual paper work that therapists are expected to complete at the initial interview or rehabilitation session with the patient. This could be more easily viewed as a usual part of a rehabilitation intervention if prompts to include the return to work information sheet and the return to work letter were added to the protocols of care (see Appendix 5) and to the initial assessment form. The time to carry out such an assessment was negligible as the information exchange was no more detailed than usually requested in an initial interview but the assessment would, instead, provide a focus upon vocational needs of the individual.

Formal vocational rehabilitation programmes have been developed in Australia and the USA (see section 1.8). Harth *et al* (2008) described a hand therapy department in Germany that was devised to purely focus upon the social needs of their patients. Such options are rarely available in the United Kingdom and it is unusual for occupational therapists to have regular access to psychological services, social workers, vocational rehabilitation workers or social services for example when

working with hand injured patients due to the focus on acute care in the modern National Health Service (Joss, 2002). The findings from this study have demonstrated that it could be possible to include a vocational component in the usual rehabilitation intervention. Ross (2007) describes how a case management approach is often used in vocational rehabilitation and this study has demonstrated how aspects of this can be incorporated in a hospital-based occupational therapy department without significantly encroaching on the usual provision of rehabilitation services.

It was commonly reported amongst the participants in both stage one and stage two, that they were unaware of the sick leave policy of their work place. This finding was similar to that described by Curtis (2003). The first phase of the return to work intervention provided an opportunity to enable participants to consider the realities of being back at work while managing a healing hand injury. The reality was that participants commonly returned to work very soon after their surgery for a broad and varied number of reasons (see section 5.3 to 5.6). In the second stage of the study, Mohammed reported that when he discussed the first phase of the return to work intervention with his occupational therapist (Appendix 15), the detailed examination about how he intended to do his job helped him realise that perhaps he was returning to work too soon. He instead opted to take more time off to help him recover more fully and to devise a return to work strategy that reflected his specific return to work needs. The need to include patients' concerns when developing interventions has been highlighted (Harth *et al*, 2008, Medina-Mirapex *et al*, 2009) and the intervention described in this study is an example of how this can be done.

In the second stage of the study, participants reported that with use of the return to work intervention they were able to structure their return to work in a way that took into account their ability to manage their work and their rehabilitation needs at the same time. All participants in the second stage of the study gave a copy of the return to work letter to their manager or Human Resources Department and stated that it was used to make modifications to their usual daily work tasks. Holmes (2007), Black (2008) and Coole *et al*, (2013) highlighted the need to include the managers from the workplace in any return to work intervention. In this study it was decided by the researcher not to include the manager in the development of the return to work intervention as it was considered that it would be often unpractical for occupational therapists to have the time to engage the manager. The first stage of the study examined the experiences of individuals on their return to work journey

and it was decided to use these experiences in the development of the intervention. The manager and/or Human Resources Department were made aware of the return to work plan as all of the participants in the second stage of the study opted to give the return to work letter that they had written with their occupational therapist to their manager. No manager opted to contact the occupational therapy department to seek clarification or more detail about the return to work plan. In the findings from the first stage of the study, it was reported that managers appeared to be willing to allow their employees to work at a reduced level for a period of time (section 5.6.2). Often the return to work experience became problematic as time passed and the repairing structure did not heal as anticipated (section 5.5.3). It appeared that the return to work intervention used in the second stage of the study offered a means of providing a structure for both the participant and the manager to follow. As previously mentioned, no manager or Human Resources Department took up the offer of making contact with the hand therapist to discuss the return to work plan. It is possible that the return to work plan provided the authority needed to enable them to make decisions concerning the management of their recovering employee, to make any return to work modifications, plan time off or arrange to permit attendance in outpatient rehabilitation programmes for example.

Coole *et al* (2013) also reported that allied health professionals were reluctant to take on vocational rehabilitation roles as there was no funding in place from either the National Health Service or Social Services. The return to work intervention in this study has been developed for it to be possible to be implemented within the usual running of an occupational therapy outpatients department. There is scope for the National Health Service or Social Services to fund the time that may be needed to fully implement such an intervention but Alsop (2004) highlighted that it is not clear who could take the responsibility for providing support for such vocational rehabilitation programmes. Alsop (2004) had argued that there was a need for the occupational therapy profession to rediscover core occupational therapy skills that included vocational training programmes. If a larger study was instigated to include return to work planning with hand injured patients, it would be necessary to clarify any potential financial implications as well as a need to explore how the occupational therapist's role could be developed. The role of occupational therapists working with hand injured patients in an acute hospital setting has focused predominantly on therapy to repair the structure of the injured hand and there may be financial implications if the remit of the job was expanded to include patient concerns more fully in the rehabilitation process. This may need to be considered as

it could be possible that NHS employers may not allow such an intervention to be included in existing rehabilitation intervention agreements.

Participants reported that they felt that the return to work letter provided an opportunity to discuss their return to work plan with their manager and modify their working activities to enable them to be at work but working at a reduced capacity. This appeared to afford an opportunity to exert some control over the return to work process that would take account of their needs and concerns unlike the experiences of participants in the first stage of the study (see section 6.2.1). This differed from the findings from the first stage of the study where it was often reported by participants that they felt powerless to discuss their return to work needs with their manager (see section 5.6.2). The return to work plan also included scope for the participant to continue with their hand therapy programme – attending hand therapy appointments for example. For example Christine reported that she found it difficult to attend her outpatient hand therapy appointments due to perceived pressure at work (section 5.5.2). Working in conjunction with the occupational therapist in the second stage of the study to develop a return to work plan that included the need to attend their outpatient rehabilitation programme went some way to make it more acceptable for participants to attend their therapy appointments.

In the second stage of the study all but one of the participants used the second stage of the return to work intervention (Appendix 16) on one occasion. However, Cath opted to use the return to work letter on three separate occasions throughout her return to work process. When she initially returned to work she found that the return to work plan needed to be updated because her healing process was taking longer than anticipated. Cath also reported that as her job was office based her colleagues found it difficult to fully appreciate the on-going rehabilitation needs. Cath requested a second and then a third return to work letter as she reported that they were a useful means of providing externally validated updates on her progress. From an occupational therapy perspective the requests were valid as her healing process was taking longer than initially anticipated. The multiple use of the return to work letter that emerged as part of the process for Cath was unanticipated as part of the intervention plan but was a valid use of the tool and led by the needs of the participant. In both the first and second stages of this study it was apparent that returning to work was not necessarily an indication of a positive outcome and participants often reported on-going difficulties. This phenomenon was reported by Butler *et al* (1995) with patients experiencing musculoskeletal injuries but, within the

hand therapy and hand surgery literature, the ability of an individual to return to work is still viewed as an indicator of a positive surgical and rehabilitative outcome (Bruyns *et al*, 2003; Meiners *et al*, 2005). This perspective has been challenged in this study and the need to include a successful return to work should be considered in future studies.

8.6 Summary

The return to work intervention is a practical application of how to include individuals' concerns in the development and implementation of rehabilitation programmes for patients with hand injuries. Including participants' concerns when developing the return to work intervention afforded an opportunity to use a client-centred approach for this patient group. Co-writing the return to work plan has helped make the return to work intervention more meaningful and relevant for the participants. The flexible use of the return to work intervention provided an opportunity to help clarify any unrealistic expectations of the participants and managers by providing more accurate information concerning returning to work. Occupational therapists' involvement in the development of the intervention provided authoritative and independent direction for managers and participants to implement the return to work plan. Returning back to work is not an indicator of a positive surgical and rehabilitation outcome. Difficulties once back at work were apparent and occupational therapists working with hand injured patients should be aware of this.

Chapter 9: Discussion of the complete study and conclusion

9.1 Introduction

This study was developed in two stages. The first stage examined the experiences of individuals returning to work while managing a traumatic hand injury. The second stage used findings from the first stage of the study to develop and pilot a return to work intervention. This chapter will discuss how the research aims were met. The aims were to:
1) explore in detail individuals' experiences of returning to work following a traumatic hand injury in a United kingdom-based hand therapy department, and
2) use insights gained in stage one, to develop and pilot a return to work intervention.

This chapter will discuss the implications of the study within the context of current literature. In addition, consideration will be given to how the findings from this study may impact upon service provision for this patient group by adding a focus on patient perspectives as a means of broadening and deepening rehabilitation interventions. In particular, the adaptive process that participants experienced will be discussed. Theoretical underpinnings for this study will be debated as well as the strengths and limitations of the study. Personal reflections are included and recommendations for future research will be highlighted.

9.2 Patient perspective of returning to work

The aim of the first stage of this study was to gain insights into individuals' experiences of returning to work once they sustained a traumatic hand injury. Findings demonstrated that being back at work proved more difficult than initially anticipated (sections 5.4.1; 5.5.1 and 5.6.1). Participants mainly opted to return to work soon after the injury and expressed a wish to do so. Therefore, it can be concluded that there is a need to focus upon ways in which individuals can return to work safely. Participants soon realised that their injured hand may not fully regain its premorbid function and would take much longer than was initially thought to recover enough to allow function to resume in an adapted fashion (sections 5.4.2; 5.5.2 and 5.6.2).

This study has demonstrated that participants were aware of the need to participate in a hand therapy exercise programme but often felt unable to fully do so as they also were trying to get on with their usual activities of daily living. Awareness of such difficulties provides an opportunity to develop literature that includes patient concerns in the development of rehabilitation programmes for hand injuries rather than hand therapy programmes that simply highlight the need for patients to comply with hand therapy/exercise programmes (Evans, 2012). If the individual proposes to return to work, a rehabilitation plan that includes both hand therapy and vocational needs can be developed. Such conflicting pressures made it difficult for participants to justify attendance at the occupational therapy outpatient department (section 5.6.3) due to the perceived difficulties of taking time off work.

In the first stage of the study, once back at work, participants reported that it was difficult to explain to their manager that they were struggling to manage their usual work tasks due to the fact that their hand was not yet fully healed (section 5.6.1). The only communication that the manager of the participants received was from the participants themselves. Coggon and Palmer (2010) and Innes and Straker (2002) highlight the need to include managers from the participants' workplace when developing return to work plans. The second stage of this study has highlighted that it is possible to include representatives of the participant's workplace through the use of the return to work letter. This method enabled the occupational therapy staff to provide information for both the patient and the patient's manager in a way that did not need to use up scarce therapy time. Such a focus on the lifeworld rather than maintaining routine ways of therapy provision can allow the occupational therapist to change their working practices to include patient concerns in rehabilitation interventions. In addition, the letter provided an opportunity for the participant to feel able to negotiate a return to work that took into account their rehabilitation needs and the need to provide modified work tasks to help protect the repairing hand and therefore allow for a more structured return to work.

The ability of a hand injured patient to return to work is cited as evidence that there is a positive outcome from the surgery and rehabilitation processes (Bruyns *et al*, 2003; Evans, 2012). This study changed the focus from whether or not the individual returned to work to examining more closely specific issues and concerns that individuals may experience getting back into and being back at work. There is a need to focus upon good surgical and rehabilitative interventions but equally there is

a need to include the patient's perspectives. The first stage of this study examined in detail how individuals participated in their exercise programme and also examined why sometimes it proved difficult for them to do so. The return to work intervention in the second stage of this study was developed purely from patients' perspectives from the findings from the first stage of the study.

Concentrating on the participants' perspectives when devising a return to work intervention may go some way to bridge the gap between the participants' GP and their manager or Human Resources department by providing a communication channel between both parties. Coggon and Palmer (2010) and Suff (2011) highlighted that GPs often found it difficult to understand in detail what potential difficulties may present themselves to their hand injured patients. Often GPs cited (Coggon and Palmer, 2010) that they found it difficult to make a shift from their primary role of being an advocate for their patient to providing support to get them back to work (section 1.6). Managers similarly cited (Suff, 2011) the fact that information they received from GPs often proved too general and it was not clear how best to put into practice suggestions that were made (section 1.6). This study has demonstrated that the occupational therapist working with the hand injured patient was in a good position to provide an informed opinion about the recovery process for both parties and that the participant's workplace had a more detailed return to work plan available to them.

The second phase of the return to work intervention, the jointly written return to work letter, offered a provision for the participant's manager to contact the occupational therapy department to clarify points within it. This offered an opportunity to provide a dynamic and responsive intervention that would take into account the needs of both the participant and the needs of the participant's work place. Although it did not happen in this study, it is possible that the manager or Human Resources Department may not accept the work modifications that are devised in the return to work intervention. The occupational therapist, by maintaining a return to work dialogue with their patient, can discuss further options. There may be a reality that some managers may not allow the patient to return to work until their hand injury is fully healed. In this case it may still be possible to negotiate a reduced level of work and more importantly a time frame for the return to work by helping to provide insights into how long the reduced functional level is anticipated to last. Perhaps if the patient is made aware that the rehabilitation process is time limited, they could more easily cope with incorporating this into their life.

It has often been assumed that manual workers would have greater difficulty returning to work than those engaged in more sedentary jobs (Bruyns *et al* 2003; Amick *et al*, 2004 and Evans, 2012). Insights gained from this study challenge this assumption by highlighting the type of difficulties individuals had getting back to work, as problems described by participants were more concerned with lack of return to work planning or the inclusion of work modification programmes in the first few months following the injury. Difficulties completing work duties were cited by participants from a broad range of jobs and were not solely from those in manual jobs. A return to work plan that takes into account organisational structures of the workplace and the needs of individuals could provide a way for the individual to make a much smoother transition back into work. Some injuries may be so severe as to negate the possibility of being able to resume usual work duties but providing a communication channel for the patient and the work place that bridges rehabilitation possibilities with work needs may go some way to smooth the transition back into work. This could be done if the occupational therapist could provide information for the patient to help them make realistic decisions about their future. In addition, the return to work intervention may be able to provide the basis for further rehabilitation interventions if required or to help benefit agencies to provide appropriate levels of support.

9.3 The role of the occupational therapist in the return to work process

Joss (2011) and Stuckey (1997) highlighted that occupational therapists are well placed to assist individuals' return to work. Steward (2004) highlighted the need to include patients' concerns when developing rehabilitation interventions. This study would concur with such findings but developed the ideas further by incorporating patients' perspectives described in the first stage of this study into the development of the second stage of this study – the return to work intervention.

One way that this was done in this study was by including return to work planning more fully in their rehabilitation programmes. The first phase of the return to work intervention was used as a method of discussing (in more depth than usual) potential barriers or concerns that may impede a successful return to work (section 8.3). Waddell (2008) and Joss (2011) also highlight the presence of such barriers

but this study has developed and piloted a way that such barriers can potentially be overcome by occupational therapists working in busy, time constrained outpatient therapy departments. The focus on the lifeworld of individuals in the first stage of the study afforded an opportunity to include such insights into the development of the return to work intervention. Todres *et al* (2007) highlighted the need to include such patient concerns when developing rehabilitation interventions to make them truly patient centred or lifeworld-led.

Previously concerns relating to return to work focused upon the need to ensure that the surgical repair would not be put at risk (Evans, 2012). This study has demonstrated that return to work planning could be incorporated into standard rehabilitation protocols of care to support a successful return to work. This study has also demonstrated how patient concerns regarding getting back to work, can be included in rehabilitation programmes. This sits well alongside the development of the 'fit-note' to replace the 'sick note' which was initiated to provide a focus upon the possibility that an individual may be capable of managing reduced or modified working activities (Welsh *et al*, 2012). Coggon and Palmer (2010) welcomed the fit note as a means of communicating to the individual's manager details about their ability to work at a reduced capacity but added that GPs often feel unclear as to how best to suggest ways of defining modified working practices. Occupational therapists, in conjunction with physiotherapists and podiatrists, have developed their own version of the 'fit note' called the AHP-AFWR. This study shares a similar position in that the need to include return to work planning should become a part of rehabilitation interventions, but the study also demonstrated how return to work planning can become central to patient rehabilitation interventions. The return to work intervention in comparison to the AHP-AFWR is a more flexible means of providing ongoing, relevant and timely information for both the participant and the participant's workplace. This could only be done by placing the participant at the centre of the rehabilitation intervention.

Medical treatment and hand therapy have been developed to ensure the repairing structure returns as close as possible to its premorbid state (see section 1.3). Hand therapy has been developed to provide rehabilitation interventions that focus on this treatment goal (see section 1.2). Using occupational therapy perspectives by including patient concerns may afford an opportunity to broaden the scope of rehabilitation for this patient group (Fitzpatrick and Presnell, 2004). This study has

demonstrated how patient needs in relation to return to work can be included in the provision of hand rehabilitation.

9.4 Theoretical implications of this study

The findings from this study have highlighted how it might be possible to integrate patient perspectives in rehabilitation interventions traditionally used with this patient group. In the first stage of the study participants were attempting to manage their hand therapy programme as well as their need to get back to work simultaneously and without any assistance or advice on how this may best be achieved. The return to work intervention reinforces how this can be done. The role of the occupational therapist working with hand injured patients is central to the development and execution of this intervention. The occupational therapist was able to manage concerns reported by the participant and the workplace representative by discussing the participant's needs and helping to devise a means of including such needs into their rehabilitation interventions.

Grounding the study in the lifeworld of the participants provided an opportunity to challenge current rehabilitation interventions for this patient group that are based on the medical model. In addition the examination and the use of the findings to devise an intervention that was lifeworld –led proved a useful means of including patient concerns more fully into rehabilitation interventions for this patient group. This may afford an opportunity to make a shift from rehabilitation interventions that solely focus on the repaired, or healing structure and examine ways that include patient concerns. Hand therapy literature discusses the need to include such concerns (Jack and Estes, 2010) but how this can be done has not yet been described. Grounding the return to work intervention in the lifeworld goes some way to exploring how patients' concerns could be included in rehabilitation interventions. Such interventions could be used to complement necessary medical treatment for this patient group. The interface between the biomedical model and participants' perspectives has been tempered by the findings of this study. The focus upon the lifeworld of the participants has provided an opportunity to include biopsychosocial concerns and to contest how post-operative research is reported. This focus challenges the idea of what recovery means for this patient group by increasing understandings of the adaptive process as well as understanding how a patient may participate in the development of their own return to work plan.

The introduction of occupational therapy principles into the field of hand therapy will need to be examined in more detail. The role of the hand therapist has been developed to work in an acute setting to manage the post-operative repair of traumatic hand injuries. This study has highlighted that there is scope to broaden rehabilitation for hand injury patients beyond therapy for just 'the hand' to include therapy for the whole person. Focussing upon dynamic interdependent relationships between the person, occupation and environment as proposed in the Canadian Model of Occupational Performance and Engagement (Townsend and Polatajko, 2013) provides the basis to develop a lifeworld-led, bottom-up approach to rehabilitation interventions for this patient group.

9.5 Limitations of the Study

Due to the qualitative nature of the study design, the sample size was small as the aim was to explore participants' experiences of the subject under investigation. The researcher was aware not to generalise results and of the need to be "*careful not to make definite what is indefinite*" (Dahlberg *et al*, 2008, p. 94). A concern of the researcher was to 'bridle' any pre-understandings but at the same time attempting to remain open to the phenomenon under investigation. The need to maintain a balance was a continual concern throughout the analysis of the data in the first and second stages of the study. Even though this was done throughout the study, there was a risk that the findings of the two stages of the study expressed the researcher's own pre-understandings. To attempt to make the study trustworthy the process of analysis was as open and transparent as possible with clear documentation of the process and decisions. However, as the researcher is interpreting the findings their prejudices will inevitably have had some impact on the directions of the findings.

When developing rehabilitation interventions, there is a need to include patients' opinions, concerns and values to provide an opportunity for them to be in control of their own care. In addition, the National Institute for Health Research (NIHR) has introduced a strategic review of public involvement in health research entitled 'Breaking Boundaries' (NIHR, 2014). This strategic review has been developed to ensure that members of the public play an important part in the development and instigation of health-related research. A lifeworld-led approach in this study (Todres

et al 2009) used patients' experiences to shape the development of the return to work intervention. It was considered that the development of the return to work intervention may have been enhanced if patients were directly involved in its development. A balance had to be made between the potential advantages of including patients' perspectives at this point in the development of the return to work intervention against how this may have diminished the findings of the lifeworld which goes beyond individuals' conscious thoughts. It was decided to maintain the focus on the lifeworld for the content of the return to work intervention but if the study was to be implemented in a larger study in the future it may be useful to include patients' views in relation to some aspects of its implementation.

In the time available, the pilot of the intervention was very small scale. A more robust pilot with greater inclusion of a range of occupational therapy staff would be a stronger test of the potential of this intervention and rehabilitation approach. This would also permit follow up of individuals from a wider range of job roles

Participants were followed for up to two months, which provided an opportunity to gain insights into the experiences of being back at work but it would have been of interest to assess experiences for up to a year following their return to work to explore decisions that would have been made by participants that may have impacted upon their work choices.

9.6 Contribution to knowledge

This study provided new insights into fourteen individuals' experiences following a traumatic hand injury. The longitudinal component has provided insights into how individuals adapted to their new work-life situation over time. These insights provide an opportunity for occupational therapists working with hand injured patients to reconfigure how rehabilitation may be approached by examining the lifeworld and focusing upon therapy, social and work needs rather than purely acute medical concerns. The need to include patients' lifeworld has been built upon by providing an example of how their meanings and insights were built into the piloted return to work intervention used in this study.

Examining individuals' experiences and the meanings that they attached to them over time was integral to the development of the new return to work intervention.

New insights emerged into decisions participants made when confronted with the need to manage a traumatic injury within the context of their lives. For example it was found that contextual concerns played a significant part in participants' ability to engage in their post-operative hand therapy. If the participant lived alone, whether they received sick-pay/benefits, could take time off work or not or family concerns all played a part in the decision making process. Using the fact that a hand injured individual returned to work or not as an indication of a positive outcome measure in the hand therapy/surgery literature has been challenged. This study has demonstrated how going beyond the medical model and including patient perspectives in the development of rehabilitation interventions can be possible.

This study revealed the extent and detail of the effects of sustaining a traumatic hand injury. The prospective and longitudinal nature of the study provided an opportunity to gain insights into the detail of how the injury impacted on participants' ability to manage their return to work. Chan and Spencer (2004) and Strong (2005) highlighted that individuals adapt to their hand injury over time; however, this study showed the adaptive process in more detail throughout the rehabilitation and return back into work. The different stages highlighted in the findings (see section 5.4 to 5.6) demonstrated how an individual changed over time. The themes of naivety, 'reality bites', 'the new hand', 'it's only a finger', 'competing priorities', 'regrets', 'expectations', 'it's not how I thought it would be', 'acceptance of the work- life', have provided more depth to the changing experiences of participants with hand injuries. The emerging details of these experiences have shed light on the fact that the return to work journey is complex and that getting back to work is not the end of the story.

Insights gained from the first stage of the study indicated that it was the injured person who was leading the return to work plan. However, they were the ones who least understood the implications of the injury (as suggested by 'naivety', 'it's only a finger' and 'expectations'). This new understanding about who was in reality leading the return to work plan led to a reconsideration about how the occupational therapist could take on the role of working *with* a patient to develop a planned return to work.

The implications of gaining such insights into how individuals' experiences may change over time are that rehabilitation interventions can be devised that reflect these changes. This informed the development of the return to work intervention in the second stage of the study. This is an example of how patient concerns can be

incorporated into the development of rehabilitation interventions as has been called for in the literature (Steward, 2004; Strong, 2005 and Gustafsson *et al* 2012).

Many participants involved in the first stage of the study reported difficulties with their return to work experiences. Some participants reported that they felt overwhelmed by the array of choices available to them, for example: how to best manage their exercise programme, whether to return to work or not, or how they would be able to manage their work tasks. The reality of being back at work often proved more difficult than anticipated and a lack of relevant information to assist them was reported.

In the second stage of the study many participants reported experiences of feeling in control of their return to work by being able to plan the return to work as they often reported a better understanding of the return to work process. Participants' ability to negotiate a return to work that allowed them to modify their work activities and justify their attendance at their therapy appointments provided an opportunity for participants to gain a sense of control over the return to work process.
This change in tone highlighted a shift from a sense of uncertainty to one of increased control.

The development and implementation of the 'fit note' and the AHP fit note (AHP-AFWR, 2011) coincided with the development and pilot of the return to work intervention. It became clear that both GP and AHP fit notes are being used as a single use intervention. The GP-issued fit note has been received as a useful progression away from purely signing an individual off work due to sickness or disability as there is now an opportunity for them to request some form of work modification. A concern that has been raised is that the GP fit note does not address the type of modification that may be of benefit to assist the individual concerned. Managers raised concerns that the communication between themselves and the GP was unclear and they reported difficulty in interpreting how the proposed work modifications may be implemented (see section 1.7). The Allied Health Professionals version of the fit note (AHP-AFWR, 2011) was found by Coole *et al* 2013 to have been not widely used by occupational therapists as they reported being unclear how best to incorporate its use into their day-to-day practice. In this study the idea of communicating directly with the work place has been built upon by making the patient's perspectives and requirements central to communication. In addition, the letter is viewed as one aspect of the focus upon returning patients to

work, as the need to include occupational therapists in the return to work planning was deemed vital.

9.6.1 Change over time following a traumatic hand injury

The longitudinal component of the first stage of the study demonstrated that individuals' perceptions of their injury and their relationship with it changed over time. When first injured, individuals were unable to accept or understand that the injury was going to seriously affect their ability to engage with their usual functional activities. Strong (2005) concluded that individuals who have sustained a traumatic hand injury do adapt over time and their hand injury can affect their ability to participate in work. Similarly, Schier and Chan (2007) and Gustafsson *et al* (2012) described that such an injury can cause greater temporary disruption to the individual than they could have anticipated. This study, by focussing upon the adaptive processes of returning to work while managing a traumatic hand injury, highlighted how the perception of sustaining such an injury shaped their whole return to work experience. This study was similar to Strong (2005) in that it revealed that participants expected to make a swift recovery and expected that they might only experience a limited loss of use in the initial phase of being back at work. It differed from Strong (2005) in that, by focusing upon the experience of returning to work, it provided insights into how an individual adapted and how this process was influenced by social factors such as family, friends, colleagues and managers. This study highlighted the fact that participants reported that colleagues, family and friends often found it difficult to understand the influence that such an injury might have on their ability to manage to get back to work. Such perceptions often shaped choices that were made by the participant. Subsequent decisions about getting back to work and using the injured hand were often influenced by these perceptions and not based solely on rehabilitative needs.

Rather than limiting the scope to solely acknowledging that individuals adapt to their new circumstances, this study examined in more detail how the participants adapted while being back at work. Literature that views 'return to work' as an indication of a positive outcome is often making an assumption that a good surgical and rehabilitative repair will mean that the ability to function independently will ensue (Bruyns *et al*, 2003). This study differs in that it has demonstrated that this is not often the case. Being back at work can cause a significant upheaval for both the

individual with the injury as well as the manager and colleagues within the work place. Uncertainty can be caused by a lack of understanding of the true impact of the injury on the ability of the individual to manage their usual activities. In the first stage of the study, participants reported that their managers and colleagues found it difficult to understand why the injury was having such a continued significant impact. This lack of understanding between all parties in the first stage of the study may have contributed to the injured individual being at risk of becoming isolated, of putting their repairing structure at risk and losing confidence in the support structures of the workplace. It was reported by many participants in the first stage of the study that managers and colleagues were initially supportive of the injured individuals but were unclear how to provide modified working practices and for how long. Gaining such insights, this study provided an opportunity for the occupational therapists to provide a support structure that took the concerns of the individuals, the workplace and the healing structure into account. This provided a bridge for the individuals to participate in both the essential rehabilitation programme while managing their return to work. Such a bridge can make use of details gained about adaptive processes that individuals may encounter on their way back into work to develop rehabilitation interventions that may anticipate such changes throughout the recovery process.

9.7 Recommendations for future research

The longitudinal component of the study provided new insights into how individuals adapted to their new circumstances over time. Insights gained from examining the adaptation process that individuals experienced proved a useful method of describing how participants adapted to the realities of their injury and how this developed over time. Such insights were used in the development of the return to work intervention in this study. New insights, for example, into the adaptive processes of this patient group could be gained that could be used to provide the basis for rehabilitation interventions that match the needs of an individual at a specific point in their rehabilitation journey.

With respect to the research aims in this study, findings have demonstrated that the experience of returning to, or remaining in work following a traumatic injury can prove difficult. The College of Occupational Therapists (2010) states that ‘work’ can be understood in a sense of participation in activities of daily living that may not be

paid work but still have the benefits that being in work can provide, for example roles in the voluntary sector or parenting roles. The findings from the pilot of the return to work intervention in the second stage of this study could be broadened from focusing upon work to include concerns that hand injured patients may have, such as managing a caring role and a hand injury. If the developed return to work intervention is integrated with the usual hand therapy intervention both the information sheet and the return to work letter should be incorporated into the rehabilitation guidelines to ensure that they are used appropriately.

The focus of this study was on individuals who were in full time paid employment attempting to manage a return to work and a rehabilitation programme at the same time. Those that were self-employed were excluded from the study as an assumption was made that the self-employed would constitute a separate group (see section 4.3). It would be of interest to examine the experiences, motivations and concerns of self-employed hand injured patients as such understandings may open new avenues of enquiry. Findings from this study have focussed upon individuals who sustained traumatic hand injuries but, as the findings demonstrated, it was the social and interpersonal concerns which proved to be the main obstacle on the participants' ability to return to work. Perhaps similar studies could be carried out for those individuals with musculoskeletal injuries in general (for example lower back pain, shoulder pain or knee pain).

The implementation of the return to work intervention proved daunting for occupational therapists involved in the study. Therapists reported that they found it difficult to provide an opinion concerning participants' ability to manage their hand injury whilst back at work when co-writing the return to work letter. Coole *et al* (2013) reported similar findings. Although it could be argued that with the implementation of a training programme these concerns might be overcome, it may be of interest to examine ways occupational therapists working in an acute setting could re-explore ways of incorporating patient concerns in rehabilitation interventions.

It would be useful to see how the pilot study to assess the return to work intervention would work with a larger patient population. Such a pilot study could be initiated to assess the usefulness of such an intervention in more detail. It would be envisaged that such a trial could include a number of therapy departments that could work with this patient population. This could provide an opportunity to further examine how the return to work intervention would work in other hand therapy departments. A training

component for the occupational therapy staff would need to be developed and incorporated into such a study. Including occupational therapists' perspectives in the development of the return to work intervention might have been useful. It would have been useful to include the participants' GP and managers in the further development and evaluation of the return to work plan. Inclusion of other stakeholders such as the manager and GP could be useful in developing the return to work intervention further through a randomised controlled trial. Evaluation of the return to work intervention with a larger group of participants to include different circumstances and types of employment through a randomised controlled trial would also provide a more comprehensive assessment of the effectiveness of the intervention.

The lifeworld–led approach used in the development of the return to work intervention could be useful in other interventions for this patient group. Potentially new ways of working with patients to develop exercise programmes that are based on the patient population's lifeworld as opposed to an approach that has been decided upon by medical staff alone could be considered.

Participants all reported the support they gained from families and friends following their injury. It would be of interest to examine the experiences of families and friends of hand injured individuals in more detail with a view to providing them with support.

9.8 Conclusions

Literature that examined the physical and psychological effects of a traumatic hand injury was investigated within the context of current rehabilitation interventions used in a hand therapy department based in a large teaching hospital. The need to incorporate patients' concerns in the development of rehabilitation interventions has been viewed as essential; however, limited work has been done that allows for such interventions. As a result the main concern of this study has been to explore patients' perspectives of their experiences over time. The focus of the study has concentrated on the reported experiences of individuals with traumatic hand injuries who were attempting to return to work. Such a return to work focus was explored against a back drop of current United Kingdom legislation and existing return to work literature. Integrating return to work concerns while individuals managed a traumatic condition was considered essential as a means broadening the scope from purely

medical concerns to including patients' perspectives. Once back at work participants found it difficult to manage their usual work demands so it is suggested that the ability to get back to work should not be viewed as a measure of a successful surgical or therapy outcome.

The longitudinal nature of the study provided insights into the adaptive processes individuals utilised once injured, and the intervention was anchored in participant perspectives as opposed to using medically derived procedures. Such insights proved important in the development of a return to work intervention that could be used in conjunction with rehabilitation interventions that are used in typical hand therapy departments in the United Kingdom. It was found that participants were devising their own methods of managing usual day-to-day activities, *and developing their own return to work plan,* while attempting to engage with their post-operative rehabilitation. Hand therapists expected their patients to fully comply with their treatment programme but were unclear how their patients would be able to manage this. In the second stage of the study, the return to work intervention provided an opportunity for participants to experience what was reported as a more controlled return to work. This meant that participants felt able to be back at work when not fully healed and to simultaneously attend their rehabilitation programme. The findings of this study have illuminated ways that can enable occupational therapists working in hand therapy departments to include patient concerns in the development of rehabilitation interventions. This research has illuminated the complexity of the life and work journey of individuals with traumatic hand injury, the stages of the adaptation process and their rehabilitation needs.

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Appendices

Appendix 1: Audit of cause of hand injury and the gender mix in patients from the study site

Table 1: Data from a three month period indicating the cause of the hand injury

Cause of injury	No of patients
Accident	85
Acquired	54
Assault	26
Fall	81
RTA	4
Sport	14
Work	70

Table 2: Number of hand injury referrals by month and gender

	Sep	Oct	Nov	Dec	Jan	Feb	Mar	April	May	June	July	Aug	Annual total
Male	56	92	97	47	71	53	79	73	66	108	90	85	917
Female	29	50	38	33	30	40	30	39	34	33	53	39	448
Total per month	85	142	135	80	101	93	109	112	100	141	143	124	

Appendix 2: Information for occupational therapy staff about stage one of the study.

This study is attempting to gain insights into people's experiences of returning to work following a traumatic hand injury. I would be grateful if you could help to identify potential participants.

The inclusion criteria will consist of

1) Potential participants will have suffered a traumatic hand injury that will necessitate their involvement in a treatment programme of from eight to twelve weeks. This will be used as an indicator of severity. Therefore I envisage injuries that would include tendon injuries and/or bone injuries and/or nerve injuries.
2) Potential participants must be in full time work, though not self-employed, for at least six months prior to the injury.
3) The injury will not necessarily have taken place at their place of work.
4) Potential participants must be between 18 and 60 years of age.

<u>Approaching potential participants.</u>

- Make it clear that participation is entirely voluntary. If they decline to participate, let them know that this will have no impact upon the treatment they will receive in any way.
- Potential participants can be approached at the point of, or soon after their referral to occupational therapy. You can ask the potential participant if they would be interested in taking part in a research study about returning-to-work following a traumatic hand injury.
- If they are interested ask them if they are happy to be approached by the researcher who will discuss the study with them in more detail.

If you are unclear about any aspects of the study please contact the researcher,

Niall Fitzpatrick
Tel:

Appendix 3: Participant Information Sheet for stage one

Participant Information Sheet

Title: To develop a return to work intervention for people who have experienced a traumatic hand injury.

Version number:1
Date:

You are being invited to take part in a research study. Before you decide whether to take part it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully. Talk to others about the study if you wish. Please ask the occupational therapists if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part.

What is the purpose of the study and why have I been chosen?
You have been asked to take part in this study. It is part of my PhD and I am trying to find out what it is like for people to get back to work after suffering an injury to their hand. I am interested in hearing about your experiences.

What will happen to me if I take part?
I will interview you on three separate occasions. Firstly at about two weeks after the initial injury, secondly just before your planned return to work, and thirdly about one month after you have returned to work. The interviews can be done at a place of your choosing and will take about one hour to complete.
I will use the information gained to develop a way of supporting people who have injured their hands to return to work in the future. I also plan to publish findings in research journals but of course anyone who takes part will not be identified in any way.

Do I have to take part?
It is up to you to decide. I will describe the study and go through this information sheet, which I will then give to you to take you away. I will contact you by phone within a week to check if you are still prepared to take part. At our first meeting I will

ask you to sign a consent form to show you have agreed to take part. You are free to withdraw at any time, without giving a reason. This would not affect the standard of care you receive. Agreeing to take part in the first interview does not mean that you must take part in the others, though I hope you will feel that you want to complete all of the interviews.

Will my taking part in this study be kept confidential?

All information which is collected about you during the course of the research will be kept strictly confidential. If you consent to take part in the research the people conducting the study will abide by the Data Protection Act 1998, and the rights you have under this Act.

With your permission I plan to audio-record the interviews. I will keep the recordings, transcripts and any paper work in a locked cabinet in my office at London South Bank University. I will keep your recordings and paper work for the duration of the study, which plans to be completed in early 2011 and for ten years after the study has ended then they will be destroyed. Recordings will only be identified by an identification number and not by name. All names in the transcripts will be changed so you cannot be identified. No documents containing your name or contact details will be stored with the recordings or transcripts.

Are there possible disadvantages or risks in taking part?

It is not expected there will be any risks involved in taking part, but it is possible that talking about your injury may make you upset. If this happens someone has been identified that you will be able to approach for counselling.

What are the possible benefits of taking part?

I cannot promise the study will help you but the information gained might help improve the return-to-work process for people with hand injuries in the future. You will be offered a £25 voucher at the end of the third interview as a thank you for your participation.

What happens if there is a problem?

We would not expect you to suffer any harm or injury because of your participation in this study. If you are harmed by taking part in this study, there is no special compensation arrangement. If you are harmed due to someone's negligence, then you may have grounds for legal action but you may have to pay your legal costs.

Regardless of this, if you wish to complain or have any concerns about any aspect of the way you have been approached or treated during the course of this study, the normal National Health Service complaints mechanisms should be available to you.

Please contact Patient Advisory Liaison Service (PALS) if you have any concerns regarding the care you have received, or as an initial point of contact if you have a complaint. You can also visit PALS by asking at any hospital reception.

Contact Details for further information.

If you require further information about the study or have any concerns you can contact:

Niall Fitzpatrick
Research Student
Faculty of Health and Social Care
London South Bank University,
103 Borough Road,
London SE1 0AA.
Tel:

In addition, if you would like a summary of results from this study please feel free to contact me at the above address.

Any complaint about the way you have been dealt with during the study or any possible harm you might suffer will be addressed.

If you wish to make a formal complaint you may contact :

Who is organising and funding the research and where was it reviewed?

This study has been funded by the Nursing, Midwifery and Allied Health Professional (NMAHP) Committee. This study was given a favourable ethical opinion for conduct in the NHS by the East London and City REC.

Appendix 4: Consent form for stage one of the study

CONSENT FORM (Version Dated)

Title of project: The development of a complex intervention to assist people to return-to-work following a traumatic hand injury.

Investigator: Niall Fitzpatrick

Centre Number: Study Number: Participant ID Number

Please initial box to indicate agreement

1.	I confirm that I have read and understand the information sheet dated ..... (version .....) for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.	
2.	I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason, without my medical care or legal rights being affected.	
3.	I agree to participate in three interviews, the venue to be arranged.	
4.	I agree to have my interviews audio recorded.	
5.	I agree to take part in the above study.	

Name of Patient Date Signature

Name of Person taking consent Date Signature
(if different from Investigator)

Investigator Date Signature
1 copy for Participant and one for the researcher

Appendix 5: Example of post-operative protocol of care

Tendons – Extensors – Zone III and IV – SAM regime

Guideline

Time	Assessment	Actions
Theatre		• POP: wrist and finger extension • Indicate structure repaired (central slip and/or lateral bands)

1st HT app.
(0-5 days)
	• Pain
	• Wound
	• Oedema
	• AROM & PROMext
	• AROM flex in splints 2&3
		Splints
		1. Finger gutter : to wear at all time except for exercises
		2. Exercise splint: 30° of PIPJ flexion
		3. PIPJ immobilisation splint with DIPJ free
		
		ADL
		• Light use of unaffected finger
		
		Home program
		• Full AROM of unaffected joint
		• 5 times/day
		  ○ 10x flex/ext PIPJ in splint 2
		  ○ 10x flex/ext DIPJ in splint 3

2/52	• Pain • Wound / scar • Oedema • AROM & PROMext • AROM flex in splints	Splints 1. Cont. splint 2. Exercise splint: 40° of PIPJ flexion (if no lag) 3. Cont. splint Home program • Cont. ADL • Cont.
3/52	• Pain • Scar • Sensibility • Oedema	Splints 1. Cont. splint 2. Exercise splint: 50° of PIPJ flexion (if no lag – if lag cont previous splint) 3. Cont. splint

	• AROM (flexion and extension) • PROM ext	ADL • cont Home program • Continue as previous • Start scar treatment on mature scar
4/52	• Pain • Scar • Sensibility • Oedema • AROM • PROM ext	Splint 1. D/C during day (unless lag : keep full time) 2. D/C 3. D/C ADL • Cont. Exercises • Start gentle AROM out of splint
6/52	• Pain • Scar • AROM • PROM ext	Splint • D/C all Exercises • Cont. ADL • Light use
7/52	• Pain • Scar • AROM • PROM ext	Exercises • Add gentle PROM flexion if needed ADL • Moderate use
8/52	• Pain • Scar • AROM & PROM • Strengthening	Adjust program as needed Gentle strengthening No impact or max heavy act. Before 12/52
F/U as per needed		
Last visit	• Pain • Scar • AROM • PROM • Grip strength • DASH	

Appendix 6: Interview guides for the first, second and third interview in stage one of the study

Interview guide for first interview

1. Tell me about your injury and how it happened?

2. Can you describe a usual day?

3. Describe the experience of living with your hand injury?

4. Could you describe an average day at work for me?

Interview guide for second interview.

1. How have you been since our last meeting?

2. How is your recovery progressing?

3. What has the rehabilitation process been like so far?

4. Can you describe your day?

Interview guide for third interview.

1. How have you been since our last meeting?

2. Functionally, how is the use of your hand?

3. You have returned to work since we last met, how long have you been back at work?

4. Can you describe to me your experience of returning to work?

5. Can you describe the impact your injury had on your interactions with co-workers, supervisors and employers? (Where relevant)

Appendix 7: Ethics Committee Approval for Stage One

East London and the City Research Ethics Committee 1

Mr. Niall Fitzpatrick
London South Bank University,
Faculty of Health and Social Care,
103 Borough Road
London SE1 0AA

20 November 2009

Dear Mr. Fitzpatrick

Study Title:	**Exploring the lived experience of returning to work after traumatic hand injury.**
REC reference number:	**09/H0703/99**

Thank you for your letter of 11 November 2009, responding to the Committee's request for further information on the above research and submitting revised documentation.

The further information has been considered on behalf of the Committee by the Chair.

Confirmation of ethical opinion

On behalf of the Committee, I am pleased to confirm a favourable ethical opinion for the above research on the basis described in the application form, protocol and supporting documentation as revised, subject to the conditions specified below.

Ethical review of research sites

The favourable opinion applies to all NHS sites taking part in the study, subject to management permission being obtained from the NHS/HSC R&D office prior to the start of the study (see "Conditions of the favourable opinion" below).

Conditions of the favourable opinion

The favourable opinion is subject to the following conditions being met prior to the start of the study.

Management permission or approval must be obtained from each host organisation prior to the start of the study at the site concerned.

For NHS research sites only, management permission for research ("R&D approval") should be obtained from the relevant care organisation(s) in accordance with NHS research governance arrangements. Guidance on applying for NHS permission for research is available in the Integrated Research Application System or at http://www.rdforum.nhs.uk. *Where the only involvement of the NHS organisation is as a Participant Identification Centre, management permission for research is not required but the R&D office should be notified of the study. Guidance should be sought from the R&D office where necessary.*

*Sponsors are not required to notify the Committee of approvals from host organisations.*It is the responsibility of the sponsor to ensure that all the conditions are complied with before the start of the study or its initiation at a particular site (as applicable).

Approved documents

The final list of documents reviewed and approved by the Committee is as follows:

Document	*Version*	*Date*
REC application		
Investigator CV		03 September 2009
CV - Prof Pamela Eakin		10 September 2009
Data Protection Act Research Form		03 September 2009

Peer Review		23 July 2009
Information sheet for occupational therapy staff	1	10 September 2009
Consent Form	1	10 September 2009
Occupational therapy home assessment policy		09 December 2004
Interview Schedule	1	10 September 2009
Provisional R&D Approval - Statement of Indemnity Arrangements		11 September 2009
Applicant's Checklist		
Response to peer review and details of amendments to the protocol.		30 October 2009
Letter of agreement from clinical Psychologist - Dr Hannah Falvey		30 October 2009
Amended protocol incorporating amended participant information sheet		
Response to Request for Further Information		30 October 2009

Statement of compliance

The Committee is constituted in accordance with the Governance Arrangements for Research Ethics Committees (July 2001) and complies fully with the Standard Operating Procedures for Research Ethics Committees in the UK.

After ethical review

Now that you have completed the application process please visit the National Research Ethics Service website > After Review

You are invited to give your view of the service that you have received from the National Research Ethics Service and the application procedure. If you wish to make your views known please use the feedback form available on the website.

The attached document *"After ethical review – guidance for researchers"* gives detailed guidance on reporting requirements for studies with a favourable opinion, including:

- Notifying substantial amendments
- Adding new sites and investigators
- Progress and safety reports
- Notifying the end of the study

The NRES website also provides guidance on these topics, which is updated in the light of changes in reporting requirements or procedures.

We would also like to inform you that we consult regularly with stakeholders to improve our service. If you would like to join our Reference Group please email referencegroup@nres.npsa.nhs.uk.

09/H0703/99	**Please quote this number on all correspondence**

Yours sincerely

P.P. Senior Research Ethics Administrator

A. T. Tucker BSc(Hons) PhD SRCS

Chairman

East London and The City Research Ethics Committee 1

Enclosures: "After ethical review – guidance for researchers"

Copy to: [redacted], *The Joint R&D Office,* [redacted] *NHS Trust.*

Appendix 8: Access to Clinical Psychology

30/10/2009

Dear Niall

As agreed, I am writing to confirm the arrangements for the psychological care of the patients you will be interviewing as part of your research.

I understand that you will be interviewing a limited number of patients at three different time-points in their rehabilitation following sustaining hand injuries. As part of your interviews we have discussed that patients may disclose information which suggests that they may require psychological support. We have agreed that should this arise, I will be available for you to consult with regarding the most appropriate action to be taken. On occasions this may involve you referring that patient to their GP who will be able to help the patient access support or me offering the patient an assessment appointment to better understand their needs and signpost from there. In the unlikely event that the patient discloses that they are at risk of harming themselves you are aware that the patient can immediately access psychiatry services located in the A&E department at The Royal London Hospital. Again I am available for you to contact for consultation.

As agreed, you can contact me on the numbers above or by email.

With kind regards

Dr
Lead Clinical Psychologist.

Appendix 9: Initial readings of transcribed interviews

Example of notes following an interview

Patient reference 3A

Date of interview 11th February 2010

Signed consent form. YES

Interview number 1 2 3 number one

Gender F

Location: Occupational therapy dept.

'3' is a 29 year old right handed rehabilitation worker who works in an inner city community NHS rehabilitation team for people who have suffered a stroke. She recently moved to a new flat and had bought new furniture and equipment for it. She had bought a new kitchen knife, which was attached to a piece of cardboard with plastic cable ties and to release it she used a pair of scissors to cut through the plastic cable ties. While doing this she slipped and cut the middle joint of her right dominant index finger. She applied pressure to the wound and put some antiseptic cream onto it and covered with a plaster. The following day she was off work as she was actually moving into her new flat and she felt that she didn't have time to get the wound checked out at her local hospital, so she went to her chemist to get an opinion, as she was not sure if she had damaged any underlying structures. The chemist was unsure if anything was damaged but focused upon the possibility of the wound becoming infected so gave her some medication to help with that. She had a hunch that the injury was more serious than she allowed herself to acknowledge but she put these thoughts to the back of her mind as she needed to move house. The next day she returned to work and it was a colleague that insisted she immediately went to A&E to have the injury assessed. '3' was reluctant to go as she had patients to see but her colleague insisted and she finally went to hospital. At the A&E department her injury was examined and it was felt that a surgical exploration was indicated by the plastic surgery team and she underwent an exploration of the wound on the same day. It was found that she had lacerated an extensor tendon on her right dominant index finger. The force of the action of the scissors also loosened a fragment of bone from the middle phalanx of the index finger. The tendon was surgically repaired on 2nd February 2010. Her hand therapy was initiated on 4th February 2010.

Notes\thoughts post interview

It's interesting that this lady damaged her finger but she was reluctant to have the injury checked at a hospital. She had a hunch that the injury had caused more damage than she had hoped, that it wasn't just a superficial cut yet she overrode this feeling as she had, in her mind more pressing problems to focus upon, namely moving flat. She'd didn't have time to get the injury checked. She compromised and tried to silence these thoughts about the injury by going to her local chemist. The chemist, focused upon the wound and keeping it clean and infection free and gave her advice to have it checked out at hospital yet 3A still chose to override now her own and the chemists opinion as she hadn't time to look after herself. It was as if this injury didn't fit into her plans and she wasn't going to allow this to stop her move flat. 3B went to work three days after her injury, and at work, she was strongly advised by her colleague that she should go to the hospital immediately. Still, 3A felt it could wait until after her mornings work but it was only when she was ordered to go to hospital that she finally consented. This is interesting, she over rode her instincts for three days to allow her to continue to focus upon her immediate plans. She knew the injury was serious yet had to wait until she was given permission to opt out of her usually routine and get the injury checked out. But a change occurred at A&E she was assessed in triage initially and it was considered that the injury did not warrant further intervention and 3A insisted on having the injury checked out by a plastic surgeon to make sure this was the case. There is a real contradiction in her behaviour, it was as if now she was allowed to have the time to get her wound checked out she was going to push for a full assessment to confirm, perhaps what she already knew but had ignored to this point. Even though she underwent an operation, she didn't want to bother her parents about coming to the hospital until the surgery was over and she needed a lift home. Her parents were surprised that the injury required such a cast for just a finger injury. This is common perception following hand trauma, people don't realise the complexity of the surgery that is often required. I wonder if the same type of surgery was completed on a knee or a back "society" would understand and "allow" one to be ill. She accepted help from her parents and went to stay with them for the first night after the surgery. She called work to explain that she wouldn't be coming in the following day, and her work was cancelled. I get the feeling that she felt bad about not going into work, even though she was not getting signals from work that it was a problem that she was off. In fact her work place appeared to be supportive so perhaps the reluctance to be off was coming from 3A. This idea is strengthened as she later goes into great detail about having to take time off due to a bad reaction to the course of antibiotics she had taken and in addition when she was off, although feeling well, she cited she wouldn't go out as she felt she shouldn't be allowed to enjoy herself when she was off on sick leave. I feel 3A has a strong work ethic but is in addition, constrained by other people's opinions. She comments on this and says she has taken after her father in this regard. She was aware that the healing process for the tendon would take twelve weeks but felt that she wouldn't have to not use it for all of this time and that she would be able to slowly build up with use. She was though continually testing the barriers about the use of the hand and how she could continue with everyday function and look after the injury. This was a continual struggle for her. Insights gained she felt could enhance her ability to empathize more closely with their patient group. She is a very independent person and found the injury very frustrating in day-to-day activities. IT impacted upon her sense of self,

ironing is something she likes to do, her friends comment upon this and the fact that she is unable to iron impacts heavily upon this.

She kept in touch with work and they sounded very supportive. A plan had been made to allocate one junior staff member to assist her with her work. IT will be interesting to see how this turns out once she returns to work. She is very keen to return to work as soon as possible. Again, it was her GP who "allowed" her to take a week off after surgery. She was bored when off work, and was keen to return to work as soon as possible to get structure. She felt she would get understanding from her colleagues. A tension exists between her ability to function, other people's perceptions and understanding of the injury her own work ethic. She is attempting to balance these feelings. She felt information given by the hand therapist was not firm enough in making it clear that the tendon was at risk if over used.

My interview

I could have asked more about what the occupational therapist said about her return to work. I am still unsure how to focus the interview, although I am looking at how people return to work, it is clear that this first interview is going to be about the injury, the impact of it etc. I wonder if I could have got more from it, if there is anything I missed, if I'm leading the interviewee. One view I hold is the fact that people don't realise the impact of the injury and that other people don't realise the impact of a hand injury and therefore don't take it seriously. I did ask about this, feel it is valid as the answer I got did show that this can be the case. I do wonder though if this would have emerged if I had asked this or not.

Appendix 10: Meaning units within the context of the data

Interview 1 A Themes (initial readings)

1A	Themes	
I	Pain	
Ii	"Realisation" a) seriousness of injury b) impact of injury	
Iii	Initially manager supportive	
Iv	"Time" unclear of the rehabilitation time - 6 weeks	
V	Uncertainty	
Vi	He understood the terminology of the injury	
Vii	Impact on his workplace	
Viii	Need for support, family, children, hospital, benefits, workplace and GP	
Ix	Unable to work	
X	Isolation	
Xi	Fear of re-injury	
Xii	Meaning of the injury	
Xii	Minimising the injury	

1A TIME

Time: waiting for surgery; "so I came on Saturday, stayed the night, Sunday whole day stayed by the evening the doctor came and said we've still we've got another emergency situation so we might not be able to do it so if it's possible for me to go home, come back Monday and then they will sort me out on Monday. So I went home came back Monday, Monday stayed whole day to the ward. Erm they took me about I think four o'clock". **1A143-149**.

Time: waiting for benefits to start being paid "Hopefully, it will take a while another week, two weeks or?"**1A 267.**

Time: uncertainty how long the injury would take to regain pre morbid function. "No I haven't been told. No one has been telling me how long it takes, I don't know really?"1A 397-398.

Time to realise the true impact of the injury: "I thought this was cut and wide open I thought this is serious I didn't know there was broken finger."

Healing **Time:** No one has been telling me how long it takes, I don't know really? **1A 397-398**

Pain: The accident **"**It was very painful" 1A64 "After I felt more pain slowly coming up. So when we went to A&E the doctor gave me some pain killer, I think that probably helped me a lot."**1A 105**.

Pain: sleep "I have my painkillers go to bed after four or five hours it start to paining, probably because of the medicine I took goes. So after that I have so much pain. So every night two or three time I have to wake up." **1A 420-417**

Impact on others: wife: 1A 372-373 "but er, as far as I can see she is in a bit of a situation that she has to look after me as well." " she needs to help me out with it so she's more occupied with me as well as the children"1A 386-387.

Impact on others: children "Hard. One day the little one comes in they start you know but still make me worried, you know the one three years old jumping up... Make me "oi!" (cry of pain) and move my hand." 1A353-356

Impact on others: workplace "We've got like three drivers two assistants and er one guy in the warehouse...five or six people. We can't have more than that can't afford."**1A 310-313**.

Coping strategies - Minimising the injury:

"Like I was saying I have only two fingers broken People in the world somewhere having worse than me" **1A466-467**. "Somewhere in the world people have a worse injury than me, I am wondering how they are surviving. I am ok I am coping yeah but some people they can't use at all" **1A469-471**

He understood the medical terms, the intervention that he received.

"They gave me an appointment straight away they said we give you an appointment to the ... erm what's that word... to the hand clinic. And one of the doctors said when you go there, first thing you tell them that they said to have an X-ray done before they do anything. So I went to the X-ray and got the X-ray, came back the doctor saw the X-Ray and erm he said he's quite happy with the surgery. Cause the bones seem to be lined up Nicely." **1A 195-206**

Isolation: the inability to function isolates him from family, colleagues and the world "well erm because of the injury I'm not feeling like going out... With pins inside people rushing up someone might come onto you...It's very, you know worrying things so I'm basically staying at home all the time". **1A317-325**.

Economic difficulties: **1A 222-226**. "can't earn anything...money, money is really important in life. 'Cause I'm stuck with my bills, rent everything".

Impact on function: eating(his wife helps him) "Because when I'm eating I can't use my right hand" **1A375**

Dressing 'cause not used to it. My wife has to help me out to put the thingeys, t-shirts on **1A442**

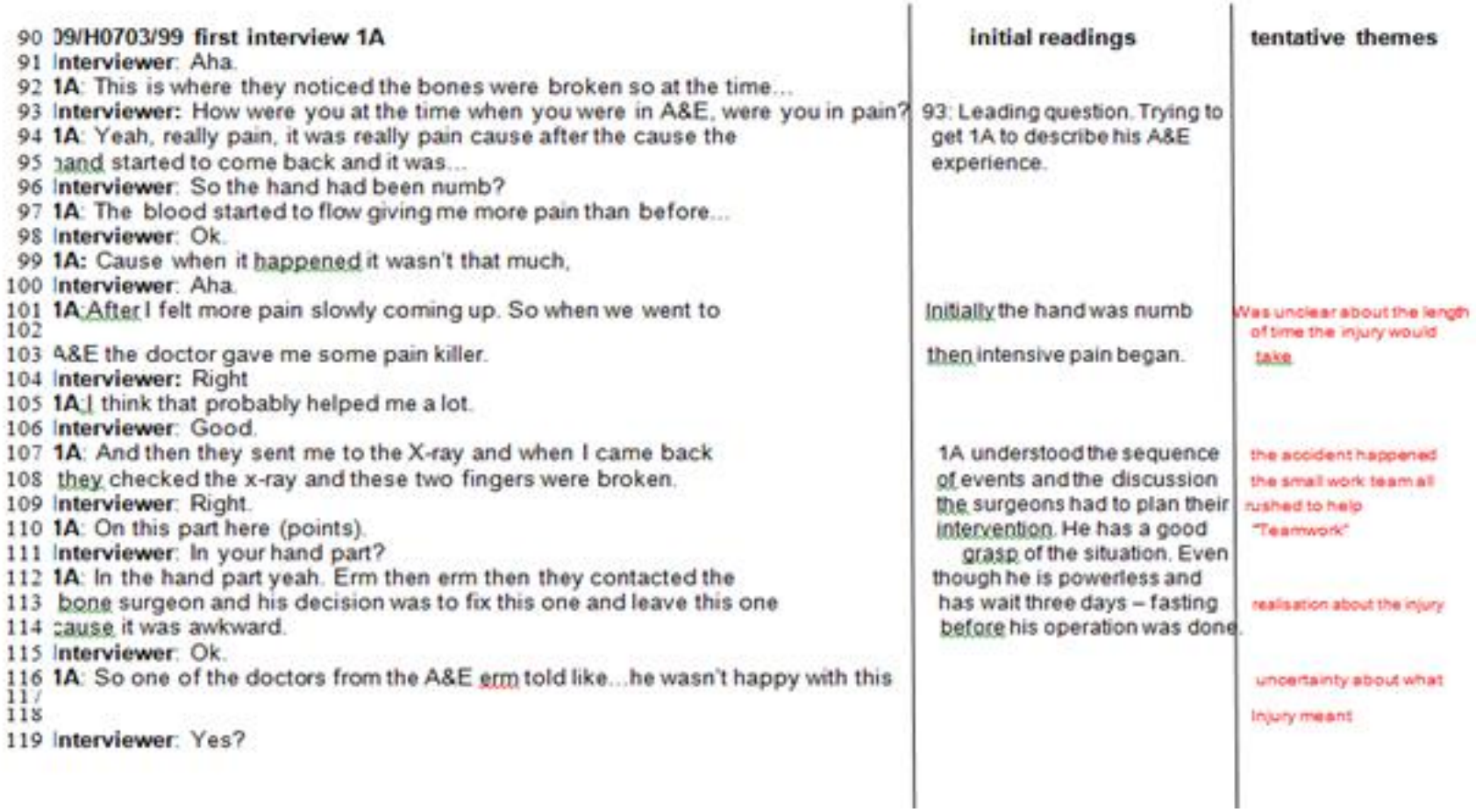
Worry about the injury "To put my hand in I am worried about these pins outside hanging. With pins inside people rushing up someone might come onto you...It's very, you know worrying things so I'm basically staying at home all the time". **1A317-325**.

1A315 "well erm because of the injury I'm not feeling like going out because I might cut into something that hurts"

Loss of role. He went from worker, father, husband, all lost at this point after the injury.

Minimising the injury. 1A 446 - 471 "Like I was saying I have only two fingers broken, people in the world somewhere having worse than me...I am wondering how they are surviving. I am ok I am coping yeah but some people can't use it at all."

Appendix 11: Organisation of meaning units at initial reading of the data



		initial readings	tentative themes
90	09/H0703/99 **first interview 1A**		
91	**Interviewer**: Aha.		
92	**1A**: This is where they noticed the bones were broken so at the time…		
93	**Interviewer:** How were you at the time when you were in A&E, were you in pain?	93: Leading question. Trying to get 1A to describe his A&E experience.	
94	**1A**: Yeah, really pain, it was really pain cause after the cause the		
95	hand started to come back and it was…		
96	**Interviewer**: So the hand had been numb?		
97	**1A**: The blood started to flow giving me more pain than before…		
98	**Interviewer**: Ok.		
99	**1A:** Cause when it happened it wasn't that much,		
100	**Interviewer**: Aha.		
101	**1A**:After I felt more pain slowly coming up. So when we went to	Initially the hand was numb	Was unclear about the length of time the injury would
102			
103	A&E the doctor gave me some pain killer.	then intensive pain began.	take
104	**Interviewer:** Right		
105	**1A**:I think that probably helped me a lot.		
106	**Interviewer**: Good.		
107	**1A**: And then they sent me to the X-ray and when I came back	1A understood the sequence	the accident happened
108	they checked the x-ray and these two fingers were broken.	of events and the discussion	the small work team all
109	**Interviewer**: Right.	the surgeons had to plan their	rushed to help
110	**1A**: On this part here (points).	intervention. He has a good	"Teamwork"
111	**Interviewer**: In your hand part?	grasp of the situation. Even	
112	**1A**: In the hand part yeah. Erm then erm then they contacted the	though he is powerless and	
113	bone surgeon and his decision was to fix this one and leave this one	has wait three days – fasting	realisation about the injury
114	cause it was awkward.	before his operation was done.	
115	**Interviewer**: Ok.		
116	**1A**: So one of the doctors from the A&E erm told like…he wasn't happy with this		uncertainty about what
117			
118			Injury meant
119	**Interviewer**: Yes?		

Appendix 12: Clustering of meaning units

Sub theme “naivety” (see section 5.4.1)

Meaning units developed from interviews

Interview one: realisation, ‘it was serious’ ‘uncertainty’ ‘time’, ‘impact’,
‘Loss of role’ ‘only a hand injury’, ‘previous hand injury’, ‘function’
Interview two: ‘regret’ ‘realisation’, ‘isolation’, ‘reduced control’
Interview three: ‘realisation’ , ‘denial’, ‘time’, ‘guilt’, ‘worry’, ‘only a finger’
‘Isolation’.
Interview four: realisation, ‘functional difficulties’, adapting’, ‘functional difficulty’,
‘underestimating the injury’, ‘experience of hand injuries’.
Interview five: ‘realisation’, guilt’, ‘severity’, ‘severity of injury’, ‘adaptation’, ‘time’,
Interview six: ‘uncertainty’, realisation’, underestimating severity of injury’, ‘making sense’, ‘wondering’, ‘functional activity’, ‘time’.
Interview seven: ‘vulnerability’, isolation’, ‘realisation’, ‘previous experience’.

Meaning units, ‘realisation’, ‘only a hand’, ‘previous experience’, uncertainty’.
These terms were clustered and the initial interview was re-read with these phrases in mind.

Many participants were uncertain about the true impact that their injury would have on their usual day-to-day activities. Previous experience of sustaining a hand injury was used as a bench mark as to how long the injury may take to fully recover. Healing times of the healing structure was often interpreted as an estimation of time it would take for functional activities to return.

Major themes one the physical journey

‘Naivety’
The injury has impacted upon most participants’ ability to participate in their usual day-to-day activities. Participants use the information that they have to hand and any previous experiences of sustaining an injury. Participants are told that their surgical repair will need up to twelve weeks to fully repair before it will be strong enough to manage usual daily activities. This idea appears to be manageable and

the time will pass quite quickly but the reality of living with the injury over the twelve weeks on a day-to-day level makes time appear to pass very slowly. In the data participants mostly (except Martin) expect that they will be able to use the injured hand even to a minor degree (temporality). The intersubjective nature of the experiences is coloured by information received from health care professional (healing phase), their work needs (manager/colleagues) and their day-to-day activities (family/friends). Martin was told the same information as the other participants but opted to remain of work for twelve weeks in all. He was aware that he would not get paid in this time and being off work wold cost a lot of money.

Participants expected that the hand would improve and the impact on their daily lives would be minor.

1A lines 397-398: “I thought it would take six weeks.”
2A line 34: “it will take six weeks”
3A line 179-180: “twelve weeks!”
4A lines 191 -192: “In touch with work –given two weeks (off)”.
5A lines 66-67: “it (the injury) was on the Thursday so I had the Friday and the weekend to recover.”
6A: line “it’ll be no problem.”
7A: lines 16-17: “so probably at the ninth or tenth week” (planning to RTW).

Reality bites:

1B line 64. “ I need to look for a new job”
1B line 119 “hand still not working”
2B: line 220-212: “ hand still not working” (8 weeks later).
3B: line 119 “ I just get on with things
4B: line 96 “ surprised how serious it was, how long it would take
4B line 156 “ it has become an inconvenience
5B line 46-48 “it was even strange when I took it off (the splint) and went walking through a crowd of people when I went shopping I got the odd sort of...not a knock but the odd ...brush past it…”.
6B line 12: “it’s getting a lot better, I can bend it now but I get pain in it” (6 weeks post operation).

7B line 28-29: “I did feel a bit useless, just sitting there not doing much, and I can’t go back to work yet…”

3)The new hand

1C: line 8 “it’s alright I can use it now”.

1C line 35 “As long as I can work with my hand that’s fine isn’t it?”

2C line 57-63 “Initially I thought six weeks was a long time.”

3C lines 205-210: “it isn’t perfect but I can do most things.”

4C lines 13-14: “ I didn’t really imagine that it was going to end up like that, no but I kinda got used to it now…”

5C line 4: “fine, pretty functional…”

6C Lines 20-22: “The movement is still a little bit...bit stiff, can you see like it doesn’t quite go down there I can make a fist properly.”

7C line 7-10 “It’s not too different; if I had to put a number on it I would say a five to ten percent difference. Sometimes I put a scalpel or clippers into my hand and it will press against my nerve and I get an unusual sensation…”

Appendix 13: Example of Longitudinal Analysis

In section 4.8 Lewis (2007) described a framework as to how longitudinal date may be analysed.

An example of a narrative change could be seen in 'John's three interviews. He initially sustained a serious fracture to his hand and following surgery the healing bones were being held in place by pins. He concluded that when the pins were removed six weeks after the surgery his pre-morbid level of function would return. He reported that he expected to return to his job at this time. He was aware that his manager had employed a replacement but was reassured that this was only going to be a temporary measure and that John would be able to return to work when he was ready. At the second interview John reported that although the pins had been removed, his hand was stiff and unable to fully function. He began to discuss the fact that he was not so interested in returning to his job. He reported that he would find it difficult to make his replacement redundant if he returned but he also reported that he was unsure if he would be able to do the job if he returned as his hand had not fully healed. This shift in perspective was amplified through his actions in the third interview when he reported that he had opted to leave his job and begin a car mechanic course. He made reinterpretations about his experiences that shifted over time. The researchers reinterpreted understandings of John's experiences over time. Initially anger on behalf of John was felt as it was considered that employing a temporary replacement or not paying John when he was unable to work were considered to be the primary motivators in his behaviour. As time was spent with the interview transcriptions and when new interviews were done a shift occurred in understandings by the researcher. It emerged that the realities of the working situation became clearer. John worked for a company that employed five people. With John off on sick leave the team simply could not function. A replacement was essential and many companies will just pay statutory sick pay. In addition it emerged that John was reluctant to return to his job as he was worried that his recovering hand may not enable to manage the physical nature of the work. His enforced absence from work provided him with an opportunity to contemplate a potential change in direction. John reported that he intended to start a full time mechanics course. Initially the researcher considered that this was due to the fact that he had been ostracised at work but it was possible that he felt physically unable to do his

job. Having time away from his job appeared to challenge his perception about his job. Similar changes were noted in the experiences of other participants in their transcribed interviews. Ian for example, expected that his injury would only prove to be a short term inconvenience and that he would soon be able to get back to his usual level of function at work. Once back it became clear that his managers and colleagues did not fully understand the implications of his injury and he became upset by the perceived lack of support.

An absence of change was clear in the perceived lack of progress in the recovery of the hand. Functional ability did not change as rapidly as had been hoped.

Appendix 14: Example of 'bridling'

"Aim not to speculate on potential meanings or go beyond the presentation of the meaning of the phenomenon" (Dahlberg *et al*, 2008, pp. 237).

As the researcher has worked with hand injured individuals for many years it was evident that certain opinions and attitudes may colour interpretations of the transcribed interviews. It was a concern that the researcher may influence the analysis. In this study, the longitudinal nature of the design afforded an opportunity to gain a deep and close relationship with the data. Focusing upon the transcribed data and the audio recordings proved vital to lessen the focus on any pre-understandings.

A clear example of how the researcher bridled any pre-understandings was when examining the initial round of first interviews. Initially it appeared that the difficulty individuals were having when getting back to work was due to poor support from their managers. This view tended to confirm what was expected from the researcher but by re-reading the transcribed interviews, examining meaning units and testing these within the context of the interview as a whole it started to emerge that the opinions concerning the managers and their working structures were coming from the participants themselves.

When 'John' was initially injured, he reported that he expected to make a full recovery; he reported that his manager was a good man who promised to keep his job open for him. I became upset on 'John's' behalf as he reported that his manager did not visit him and then employed another person in his place, still stating that if John wanted his job back he could have it when he had recovered. I felt angry on behalf of 'John' in how I initially perceived he was being poorly treated by his manager. I even felt that legally he would have an opportunity to sue his manager for what I perceived as unfair dismissal.

As I read and re-read the transcriptions and listened to the recorded interviews it became clearer that the injury had taken on a new meaning for 'John'. He realised that there was no time to wait for his injured hand to heal as there was a need to start planning for a new and alternative future away from his old job. The environment he found himself in, with the various stresses and strains placed upon

him in his life roles as father, husband as well as worker played a part in making a change in his decision making process that resulted in a shift in his planning of his future. He felt worried about his ability to do his job safely again and this played a part in his decision making. It was perhaps because of this he appeared to me unconcerned about how I perceived he was being treated poorly by his manager.

By re-reading and trying to look beyond the experiences that 'John' initially expressed a much more detailed and nuanced view emerged. The **temporal** nature of his experiences impacted on the choices and the decisions he made. His fracture took much longer than initially anticipated to heal; the passing of time appeared to slow down. Conversely, the need to get back to work made the injury take on a new meaning in the context of 'Johns' life; there was no time to wait for the injured structure to heal as there was a need to get back to work to try and safeguard his employment.

The **spatial** component of John's experiences impacted on choices that he made. Being off work meant he spent most of his time at home with his wife and children. His injury precluded him from helping his wife with childcare duties and perhaps his world became much smaller. He no longer left his home to go to work and his injury meant he could not help at home.

The injury impacted upon his wife as she had to care for him in addition to their children. His children were not lifted or played with as often due to the very real chance that his hand would be injured. Pressure was coming from the work place as he was needed back as soon as possible. His manager ran a small company and being short one person would mean the whole company could not run. A replacement was needed. This challenged my initial view that 'John' was being badly treated by his work place. The **intersubjective** nature of his injury impacted on his relationships at home and at work. How he related to his manager began to change and his sense of loyalty was challenged.

The **embodiment** of the injury impacted upon the decision making process of 'John'. He was concerned about his ability to do the job if he went back to work was initially overlooked in the initial readings of the transcribed interviews. The researcher felt that 'John' opted to leave his job due to the lack of support he had received from his manager. Although this may have played a part in decision making process, the injury itself and his perception of its implications played a part in his

decision making process. He opted to leave his job and enrol in a full time mechanics course.

It became clear to the researcher that the more one becomes involved and familiar with the data the emphasis on the researchers' pre-understanding became less of a focus and it was possible to continually strive to maintain a sense of the participant's perspectives.

Appendix 15: Return to Work Intervention –phase one

Hand out given to the participant at their first meeting with their occupational therapist.

Things to consider when planning to return to work:

- Consider speaking with your line/manager and/or HR department prior to returning to work, or as soon as possible once you have returned to work. Explain to them the nature of your injury and let them know what you will and won't be able to do. Your hand therapist will help you with this. A joint letter to your employer will be written at the time you are thinking of returning to work.
- Let your team know about the need to attend therapy/clinic appointments.
- Your return to normal function will take a little longer than the time needed for the tendon or nerve or bone to heal. It is normal for stiffness and swelling to take at least six months to fully resolve.
- You will need to continue with your exercise programme as fully as possible. Your hand therapist can give you advice on how best to include this into your day.
- Find out if you will be paid for the time you will be off and the level of pay you will be entitled to. Your line manager or HR department may be able to help you with this.
- You may need to access state benefits. Contact details for how to locate your local Job Centre and Citizens Advice Bureau can be found at the end of this information sheet.
- Please feel free to ask your manager or HR department to telephone your hand therapist in case you feel it would be useful for your hand therapist to help with your return to work planning.

Some contact detail you may find useful:

Citizens Advice Bureau. Use this number to find your local office. Tel: 08444 111 444

Department of Work and Pensions Tel: 0800 055 6688

www.dwp.gov.uk/directgov/

Signed: Occupational Therapist

Appendix 16: Examples of three letters written with participants to their manager/Human Resources Department.

1) Copy of letter given to participant 3: 'George'

Re : Name:

As you are aware Mr XXX had surgery on his right dominant ring finger on the (Date) here at the (hospital name).

As a result he will need to wear a splint full time for four weeks from the operation date to protect the surgical repair. He needs to take the splint off hourly to exercise. Once this four week period is complete he will need to wear the splint for a further four weeks when carrying out resistive activities.

I understand that Mr XXX has been signed off work for eight weeks which I feel will be enough time to allow the surgical repair to heal. I would be happy for him to return to work at this time but there will be some residual stiffness and swelling which may impact upon his ability to do very resistive tasks such as log rolling and patient transferring and he may need assistance to do this for a further month.

During this time he will need to attend hand therapy sessions on average once per week but he plans to attend these appointments in his own time. If there are any significant changes in his healing time I will let you know.

If you need further clarification please feel free to contact me, Mr XXX is happy for you to do this.

Kind regards,

2) Copy of letter given to participant 7 ‘James’

Date

To whom it may concern,

Re : Name:

As you are aware Mr XXX sustained an injury to an extensor tendon to his left non-dominant thumb and this was surgically repaired at the (Hospital) on (Date).

His rehabilitation time will last up to three months from the time of the surgery. Within this time he will need to wear a splint on his hand full time for one month as the tendon is most at risk of breaking. From the fourth week to the eighth week following surgery he will only be using the splint when carrying out heavy tasks, the tendon is able to tolerate light duties at this time. From the eighth week onwards he will be allowed to start using the hand for heavier tasks.

The tendon will not break after twelve weeks but he may have some residual stiffness and weakness at the thumb for up to six months.

I would be grateful if you would continue to enable him to attend for therapy and clinic appointments during this time. We will always try to be as flexible as possible when making appointments to ensure there will be as limited disruption as possible.

Yours Sincerely,

3) Copy of letter given to patient 6: 'Cath'

Date

Dear Colleague,

Re : Name:
Address: .

As you are aware Mrs XXX damaged bones to her left middle finger eight weeks ago. She underwent a surgical repair on (Date) to apply an ex-fix to the bone to hold it in place to optimize healing. It is planned that this ex-fix on the bone will be removed under local anaesthetic in one week's time. I envisage that she will need to wear a splint following this procedure for some weeks.

She informs me that she plans to return to work tomorrow. I would be grateful if you could enable her to have time to attend therapy sessions, after next week I envisage that this will be once a week. I feel that she will need another eight weeks to ensure that the bone has fully healed and the residual scarring and stiffness is becoming more manageable. During this time please be aware that Mrs XXX may have difficulty carrying files and typing for extended periods of time.

Please feel free to contact me if you need further information. Mrs XXX is happy for you to do this. If there are any significant changes in the healing time I will let you know.

Yours Sincerely,

Appendix 17: Information about the study for occupational therapy staff. Version 2.

This study is attempting to gain insights into people's experiences of returning to work following a traumatic hand injury. I would be grateful if you could help to identify potential participants.

The inclusion criteria will consist of:

1) Potential participants will have suffered a traumatic hand injury that will necessitate their involvement in a treatment programme lasting from eight to twelve weeks. This will be used as an indicator of severity. Therefore I envisage injuries that would include tendon injuries and/or bone injuries and/or nerve injuries.
2) Potential participants must be in full time work, though not self-employed, for at least six months prior to the injury.
3) The injury will not necessarily have taken place at their place of work.
4) Potential participants must be aged eighteen years or above.

Approaching potential participants.

Make it clear that participation is entirely voluntary. If they decline to participate, let them know that this will have no impact upon the treatment they will receive in any way.

Potential participants can be approached at the point of, or soon after their referral to occupational therapy. You can ask the potential participant if they would be interested in taking part in a research study about returning-to-work following a traumatic hand injury.

If they are interested ask them if they are happy to be approached by the researcher who will discuss the study with them in more detail.

If the potential participant agrees to take part in the study you, the treating occupational therapist, will carry out the two parts of the return to work intervention.

If you are unclear about any aspects of the study please contact the researcher,

Niall Fitzpatrick
Tel:

Many thanks

Appendix 18: Participant Information Sheet, stage two

Title: An investigation of a return to work intervention for people who have experienced a traumatic hand injury.

Version number: 2

Date:

You are being invited to take part in a research study. Before you decide whether to take part it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully. Talk to others about the study if you wish. Please ask the occupational therapists if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part.

What is the purpose of the study and why have I been chosen?
You have been asked to take part in this study as I am trying to find out what it is like for people to get back to work after suffering an injury to their hand. I am interested in hearing about your experiences.

What will happen to me if I take part?
Your occupational therapist will discuss issues concerning your potential return to work on two occasions during your usual follow-up appointments. At the second meeting a jointly constructed letter will be written to your employer.
In addition you will be interviewed by the researcher on one occasion at about eight weeks after the initial injury. The interview can be done at a place of your choosing and will take about one hour to complete.

I will use the information gained to develop a way of supporting people who have injured their hands to return to work in the future. I also plan to publish findings in research journals but of course anyone who takes part will not be identified in any way. In addition, if you would like a summary of results from this study please feel free to contact me at the above address.

Do I have to take part?

It is up to you to decide. I will describe the study and go through this information sheet, which I will then give to you. You will be given a consent form at this time. You will be asked to sign this at your first meeting with your treating occupational therapist. You are free to withdraw at any time, without giving a reason. This would not affect the standard of care you receive.

Will my taking part in this study be kept confidential?

All information which is collected about you during the course of the research will be kept strictly confidential. If you consent to take part in the research the people conducting the study will abide by the Data Protection Act 1998, and the rights you have under this Act.

With your permission I plan to audio-record the interview. I will keep the recordings, transcripts and any paper work in a locked cabinet in my office at London South Bank University. I will keep your recordings and paper work for the duration of the study, which is due to be completed in 2013, and for ten years after the study has ended then they will be destroyed. Recordings will only be identified by an identification number and not by name. All names in the transcripts will be changed so you cannot be identified. No documents containing your name or contact details will be stored with the recordings or transcripts.

Are there possible disadvantages or risks in taking part? It is not expected there will be any risks involved in taking part, but it is possible that talking about your injury may make you upset. If this happens a clinical psychologist that works with people who have sustained hand injuries has been identified that you will be able to approach for counselling.

What are the possible benefits of taking part?

I cannot promise the study will help you but the information gained might help improve the return-to-work process for people with hand injuries in the future.

What happens if there is a problem?

We would not expect you to suffer any harm or injury because of your participation in this study. If you are harmed by taking part in this study, there is no special compensation arrangement. If you are harmed due to someone's negligence, then you may have grounds for legal action but you may have to pay your legal costs.

Regardless of this, if you wish to complain or have any concerns about any aspect of the way you have been approached or treated during the course of this study, the normal National Health Service complaints mechanisms are available to you.

Please contact Patient Advisory Liaison Service (PALS) if you have any concerns regarding the care you have received, or as an initial point of contact if you have a complaint. Please telephone xxx or email, xxx, you can also visit PALS by asking at any hospital reception.

Contact Details for further information.

If you require further information about the study or have any concerns you can contact:

Niall Fitzpatrick
Research Student
Faculty of Health and Social Care
London South Bank University,
103 Borough Road,
London SE1 0AA.

Tel:

Any complaint about the way you have been dealt with during the study or any possible harm you might suffer will be addressed. If you wish to make a formal complaint you may contact: **Chief Operating Officer.**

Who is organising and funding the research and where was it reviewed?

This study has been funded by the Nursing, Midwifery and Allied Health Professional (NMAHP) Committee, at the Royal London Hospital.
This study was approved by the East London and City Research Ethics Committee.

Appendix 19: Consent form for stage two.

CONSENT FORM Dated

Title of project: The development of a complex intervention to assist people to return-to-work following a traumatic hand injury. Second Stage

Investigator: Niall Fitzpatrick

Centre Number: Study Number: Participant Identification Number

Please initial box to indicate agreement

1.	I confirm that I have read and understand the information sheet dated ..... (version 2) for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.	
2.	I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason, without my medical care or legal rights being affected.	
3.	I agree to participate in one interview, the venue to be arranged.	
4.	I agree to have my interview audio recorded.	
5.	I agree to take part in the above study.	
6.	I agree that I will devise with my occupational therapist a letter describing my return to work plan. This will be given to my employer.	

Name of Patient Date Signature

Name of Person taking consent (if different from Investigator) Date Signature

Investigator Date Signature

1 copy for Patient and 1 for the researcher

Appendix 20: Interview topic guide for stage two.

1) How is your hand coming along? (exercise programme? function?)

2) Have you returned to work?

3) Could you describe how it has been to be back at work?

4) How did you plan for your return to work?

Appendix 21: Substantial amendment

NHS
Health Research Authority

NRES Committee London - City & East
Bristol Research Ethics Committee Centre
Whitefriars
Level 3, Block B
Lewins Mead
Bristol
BS1 2NT

Tel: 01173421386
Fax: 01173420445

15 October 2012

Mr Niall Fitzpatrick
London South Bank University,
Faculty of Health and Social Care,
103 Borough Road, London
SE1 0AA

Dear Mr Fitzpatrick,

Study title:	**Exploring the lived experience of returning to work after traumatic hand injury.**
REC reference:	**09/H0703/99**
Amendment number:	**AM01 Substantial Amendment 01 Dated 15 Aug 2012**
Amendment date:	**09 September 2012**

The above amendment was reviewed by the Sub-Committee in correspondence.

Ethical opinion

The members of the Committee taking part in the review gave a favourable ethical opinion of the amendment on the basis described in the notice of amendment form and supporting documentation.

Approved documents

The documents reviewed and approved at the meeting were:

Document	Version	Date
Participant Consent Form	2	15 August 2012
Participant Information Sheet	2	15 August 2012
Protocol	2	15 August 2012
Notice of Substantial Amendment (non-CTIMPs)	AM01 Substantial Amendment 01 Dated 15 Aug 2012	09 September 2012
Study Information for Occupational Therapy Staff	2	15 August 2012
Return to Work Intervention	1	15 August 2012

Membership of the Committee

The members of the Committee who took part in the review are listed on the attached sheet.

R&D approval

All investigators and research collaborators in the NHS should notify the R&D office for the relevant NHS care organisation of this amendment and check whether it affects R&D approval of the research.

Statement of compliance

The Committee is constituted in accordance with the Governance Arrangements for Research Ethics Committees and complies fully with the Standard Operating Procedures for Research Ethics Committees in the UK.

09/H0703/99:	Please quote this number on all correspondence

Yours sincerely

pp Dr Arthur T. Tucker
Chair

E-mail: Ubh-tr.CityandEastREC@nhs.net

Enclosures: *List of names and professions of members who took part in the review*

Appendix 22: Amendment to protocol

[redacted]

[redacted] NHS
NHS Trust

[redacted]

Amendment Acknowledgement

15 October 2012

Mr. Niall Fitzpatrick
Clinical Specialist Occupational Therapist
Occupational Therapy Dept.
[redacted]

Dear Mr Fitzpatrick,

Protocol: Exploring the Lived Experience of Returning to Work after Traumatic Hand Injury.

ReDA Ref: **006943BLT**
REC Ref: **09/H0703/99**

Following review of the amendment dated **09 September 2012** for the above referenced study, [redacted] NHS Trust can confirm that this amendment does not affect current governance approval. The following documents were received:

Type	Version	Date
Participant Consent Form	2	15 August 2012
Participant Information Sheet	2	15 August 2012
Protocol	2	15 August 2012
Notification of SA Form (non-CTIMPs)	AM01 Substantial Amendment 01 Dated 15 Aug 2012	09 September 2012
Study Information for Occupational Therapy Staff	2	15 August 2012
Return to Work Intervention	1	15 August 2012
REC Approval Letter		15 October 2012

[redacted] NHS Trust can therefore continue to participate in the study and our files have been updated to reflect the changes. Please ensure that all updated patient documents contain appropriate logos, local information and contacts.

We wish you all the best with your research, and if you need any help or assistance during its course, please do not hesitate to contact the Office.

Yours sincerely

[redacted] Head of Research Resources

Appendix 23: Examples from the findings of the constituent parts of the lifeworld: temporality, spaciality, intersubjectivity, embodiment and mood (Todres *et al*, 2007, p.56) in stage one of the study

John: "'Cause I'm stuck with the bills, rent, everything.
Interviewer: "Of course. Will you get paid when you are not working?"
John: "No, because they are a small company...they are themselves suffering with their daily fees too."
Interviewer: "Really?"
John: "If they were to pay me it would be hard for them, you know what I'm saying? Hard for them." **A: 222-226 (spatiality)**

Christine: "We spoke a bit about work like when are you planning to go back to work and I said really I just don't know because my job is quite hands on. Erm, I'd say about 30 to 40% of my job is quite admin based, you know, writing, typing all that I would do with my right hand and then the other part is quite physical and 'hands-on' work. So he, my GP he suggested that I take the remainder of this week off erm, he said the last thing you want to do is to go back into work use that hand more than you should do, possibly get into a situation where you don't have the opportunity to control it and you just react and maybe go and try and catch something with that hand and the last thing you want to do is kinda rupture that tendon and have to go back under the knife so I kinda agreed with him. So he signed me off for the rest of this week" **A: 297-307. (spatiality, intersubjectivity)**

Christine: "she is aware of how much this is going to impact upon my job and is very understanding and we spoke about when I do go back to work that having a rehab assistant working alongside" **A: 316-318. (Intersubjectivity, spatiality, embodiment)**

James: "They adjust according to your needs even she said as soon as you feel you can come in to help then you can come… you can go and do office work or some inside work if you can." **A: 593-599. (Temporality, intersubjectivity)**

Christine: "I live with my flat mate and she can see how difficult things are but I don't think my other friends quite understand and I think you know, that they are shocked that I am not back at work".
Interviewer: "Have they told you that or is that what you think?"
Christine: "erm, in a sense they have said 'oh, you're not back at work yet?' They haven't asked why. There's that shock that I'm not back at work. I feel I've got to justify why I can't be at work." **A: 399-406. (embodiment, intersubjectivity)**

Christine: "I'd already been into work that morning (of the accident) and they knew I was heading to A&E and when I found out what was happening, that I was going to be going to surgery I phoned them up and let them know and said it's going to be sometime this afternoon (the operation) so I'm feeling I'm not going to be at work tomorrow. They said right 'that's fine, we'll cancel all your patients'." **A: 143-148. (temporality)**

Daniel: "Erm yes I think so. I think …yeah it hasn't done the tendon any damage, it's been good to get out of the house. I felt a little bit guilty as well...I think well it's just a finger I would have felt a bit guilty if I had stayed at home for that." **B: 460-468. (embodiment, mood)**

Interviewer: "So work was really busy?"
Sharon: "Really busy."
Interviewer: "And you had the operation on the Thursday and you went back to work on the Monday?"
Sharon: "Yeah."
Interviewer: "Did you feel able to go back to work on the Monday?"
Sharon: "Yeah, I felt ok in myself and erm...I said to my boss, you know I'll just try and do what I can. I'm more of a typist so it was a little bit awkward so I was just trying to do things one handed." **A: 57-66. (embodiment, intersubjectivity)**

Ian: "…the other guy I work with came out to see me, when I had that big boxing glove on (his splint) and like "what are you like? Literally you can't do anything?'

and I goes 'no'. I've been at home for a week going insane watching films and er, just stuff and not really doing much but …"
Interviewer: "Just bored?"
Ian: Just bored really.
Interviewer: So you'll be at work doing light work?
Ian: Yeah, I'll be going around doing smaller bits and then helping out wherever I can but it's not going to be no problem at all really. I have a smaller cast on the finger, but I still got the stitches on it so I still can't get it wet. I can't get it wet or lift anything heavy which is basically things I've gotta do every day but there are ways around **it." A: 225-236. (intersubjectivity, mood, temporality)**

Interviewer: "...has he said why he wouldn't pay you?"
Ian: "Because it was my fault apparently! Because I slipped, my hand, the silicone tube which I was opening slipped down as I cut forward with the blade. It wasn't towards me. I didn't think that I'd have the sense to cut away and the tube slipped and I opened my knuckle up."
Interviewer: "Sure."
Ian: "The top of knuckle and he said 'oh, I told you a million times to be careful which is like you know, well that's not training is it?" **(mood)**

Christine: "...I completed it (exercise) on the way into work on the bus and the way home because that was a kind of a time when I was sitting down and it was an ideal time really, I was on the bus for twenty five minutes, that gave me ample time to do my exercise programme..." **C: 139-142. (spatiality)**

Sharon: "I wouldn't have gone back to work so soon I think. I went back when my arm was in plaster which was probably the most stupidest thing to do because that hand was absolutely useless and strapped up and my arm in a sling."
Interviewer: "Why did you go back then?"
Sharon: "Because we were short staffed." **(temporality, embodiment, mood)**

Interviewer: "Did you think it would take as long as it did when you first injured your hand?"

James: “I don’t think so. I don’t think so when I first came to doctor he said ‘ok we are going to operate tomorrow’ and when he did the stitches and all that I asked him how much time it takes and he said ‘six weeks’. Six weeks I cannot, I don’t ...”
Interviewer: “Did you think that was short or long?”
James: “At the time I think it was a long time. Now I don’t think it was a long time. So thank God, because I am going to plan to run away because it takes a long time (if he knew at the beginning)”. **C: 46-52**. **(temporality, mood)**

Interviewer: “Would it have been useful to be told it would take longer than six weeks?”
James: “If they told me this so I would be more depressed. Six weeks is a big time for me. If I was told longer it would have more of a negative effect upon my mind.” **2: C65**. **(temporality, spatiality)**

Appendix 24: Second stage: initial readings of transcribed interviews

	Initial readings	tentative themes
James: "Yeah I gave that to my foreman yeah. He had a read of it… inclusionthere wasn't anything there that was a surprise it just because I had told them already you know this is how it's going to be …when I came back from here every two weeks they would see what I could do …start lifting things, not heavy things …"	letter given to manager	
	OT outpatients	dialogue with
Interviewer: "You had that chat with your OT to see what you could do?"	exercise prog.	colleagues
	Rtw plan	
James: "Yeah."		
Interviewer: "Do you think just talking about potential issues about going back to work was useful?"	considering reality of rtw: adaption	'voice of expertise'
James: "Oh yeah definitely…like I said I would have liked to have a bit more time off, the main concern was just keeping it clean,when they first put the dressing on that was my main concern but then when I started to be able to use … when I got the splint put on I could do more but it was good to hear from the ot what I could and couldn't do. Because I wasn't sure myself, if I should be lifting things which I could obviously lift things but you know … if it was too heavy and if I would do it any long term damage."	compelled to RT	
	having rtw talk	sense of injury
Interviewer: "So it's about 8 weeks since your injury, how is your hand now?		
James: "It's pretty much back to normal yeah still a bit tight at that joint. I'm still pretty nervous when I'm holding things I'm going to hit with a hammer but as far as picking things up, gripping things … the strength has got a lot more like it was."	healing	making sense of injury

Appendix 25: Second stage: examples of meaning units within the context of the data

Emerging themes	
I	Control/authority/voice of expertise
II	Risk assessement/HR policy/ bureaucracy
III	"Time" to heal; attend outpatient appointments
IV	Patient concerns –being believed/external validation
V	Power –between OT and patient
VI	Patient influencing manager –understanding of manager
VII	Planning return to work plan – e.g. altering work hours

I: 'Control/authority voice of expertise'

Interviewer: How long were you off work for?"

Mohammed: " About ten weeks."

Interviewer: "Did you contact your boss prior to going away to do the surgery."

Mohammed: "Originally I thought I'd off for a few weeks maximum but obviously when I came in I spoke to you guys you told me about my options what I can and cannot do my options which weren't clear to me beforehand became much more clear after talking to you guys. The only reason I was thinking about going back to work was because I thought I was going to get into trouble or just for the fact that they may have thought that I was taking the mick. That's the reason, it's not that I felt comfortable at work it's just that I didn't want to risk it. Obviously listening to you guys helped a lot."

"Exactly so they can see that I'm not just messing around, trying to get extra time of work and that helped a lot. It was just that mental kind of back up where I knew if anything was to go wrong, if anyone was to blame me you guys were there to back me up."

II: Risk assessment

George: "Yeah, my line manger changed part way through but at the time she was quite pleased with that. She read it and put it in the folder and she made that the basis for risk assessments and then it ended up me not having a risk assessment and me going back anyway."

III: Bureaucracy

Ana: "I think the letter is useful. Obviously my team is the way they are, HR is another department and the rest of the organisation is different so if I had taken time off that would have been more bureaucratic so then the letter would have been very helpful in that sense just to have the evidence, for their understanding and if it's …for example if I had damaged a tendon again and it's for my work I didn't take any sick leave or anything like that but I could see the potential for that to happen

IV: Patient concerns: 'being believed'

Interviewer: "Did you call into your workplace?"

Cath: "I spoke to them on the phone and after about two weeks I went in there to see them…so they could see how injured I was.

Interviewer: "That was quite helpful I'd say for them and for you?"

Cath: "Yeah I think it is important for them to see how the injury looks like and how you cope with it and for them to understand that you are not sitting at home eating chocolate…Yeah often with an injury of your hand you can walk and you can talk and be outside but people don't really think that you can be injured but if it's your leg or your back they can see it immediately."

Cath wanted to go into work so her colleagues could see her injury and understand the nature of the injury and the potential effect it might have on her ability to manage her work to her usual standard. It is possible that this behaviour was also helpful for Cath to enable her to accept that her injury was serious. This reflected attitudes from section 5.5.1 ('it's only a finger) from the findings of the first stage of the study.

VI: Participant influencing manager- understanding of manager

Interviewer: "Did you tell your boss."

Gemma: "Well I had the letter which explained to him that it would take some time but I don't think people realised that because … I was being teased yesterday about sexism because I wasn't carrying some equipment out to the car I asked one of the men if he would do it and he said that was very sexist. I didn't start a row but I thought I'd have to have a little word with him and remind him that I didn't have the strength to do it."

Interviewer: "When they don't see the injury they forget? Or your style of getting on with it enhanced that view? Was the letter useful?"

Gemma: "Yes I think my boss understood more once he got it and read it."

VII: Planning return to work plan – e.g. altering work hours

"Well the ot told me and then I spoke to work and they agreed that I should take as long as I needed. I go in in the mornings, nine to one and it's so nice to have it written down that you can have these hours."

Interviewer: "So you had a letter from the OTs?"

"That was very good for personnel to have because...for insurance and also for them to know that you are coming back and that you are restricted in what you can do and that you can't be full speed for long."

Interviewer: "That was good for them to know, was that good for you as well?"

"Yeah it was cause I could use that as these are the hours that I work and I don't do any more and it also states in the letter that I won't be up to speed and that I will need to be having a break now and then to exercise my hand and it also gives me power to leave after my hours I don't have to stay on because there is a crisis or something has to be published I can just…they know when I can come in and can see the time I am leaving at."

Appendix 26: Second stage: Clustering of Meaning Units

Meaning units, ‘control’, ‘authority’, ‘external validation’, ‘being believed’.
These terms were clustered and the initial interview was re-read with these phrases in mind.

Many participants were uncertain about what their colleagues and managers would think about the fact that they were injured and what the true impact of their injury would be on their usual day-to-day activities. Participants were keen to go into their place of work to demonstrate that the injuy was real and that their ability to work to their usual level was reduced. Having the opinion of their occupational therapist included in the return to work plan made it easier to ask for modified or reduced duties:

Theme one: ‘Being believed or understood’

Gemma: “but I don’t think people realised that because…”

Cath: “After about two weeks I went in there to see them…so they could see how injured I was.”

Cath: “…cause I could use that as these are the hours that I work and I don’t do any more…”

Mohammed: “I thought I was going to get into trouble or just for the fact that they may have thought that I was taking the mick.”

Mohammed:“Talking through with you about my injury and work gave me some confidence that really helped a lot.”

George: “People don’t understand the impact of the injury you get the impression that everyone thinks you’re having a great time…”

Daniele: “I think I made them realise in the office, even though my hand was in a sling they realised…I don’t think anyone appreciates until you’ve got it like that…”

Appendix: 27: Second stage: Example of bridling

"*Aim not to speculate on potential meanings or go beyond the presentation of the meaning of the phenomenon*" (Dahlberg *et al*, 2008, pp. 237).

The researcher was expecting that the participants would be more in control of their return to work. It was anticipated that the return to work intervention would be enough to provide an opportunity to help make their return to work be more controlled and trouble free and would be used by all participants. Ana, reported that she did not give the return to work letter to her manager as they were supportive anyway and that it was not required. This was unlike Daniele, who viewed the letter as 'back-up' to provide direct support to allow her to devise her return to work strategy. Ana did report that the letter could have been used to negotiate her return to work if her occupational health department had to get involved. This use of the return to work intervention was not anticipated by the researcher and was of interest to see how Ana opted to use the return to work intervention to suit her particular needs.